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ABSTRACT

This reference manual is designed for Peace Corps volunteers who are involved in teacher training in developing countries. It is to be used with the Teacher Training Guide that accompanies it. The first chapter discusses differences between the educational systems of the host country and that of the United States. It prepares volunteers for their roles as trainers of teachers by discussing: how to conduct a needs assessment, adult learning styles, designing training programs for teachers, and training, supervision, and observation techniques. Chapter two provides a guide for various aspects of teaching, such as child and adolescent learning, instructional objectives, lesson and unit planning, classroom teaching techniques, materials development, and student assessment and improvement. The final chapter discusses support and networking issues and specific collaboration skills. Each chapter and section presents theoretical and practical information and includes an "Activity Box" that is designed to help the trainer apply ideas presented in the section. The appendix contains a collection of forms that the trainer can use during a training session. (JD)

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TRAINING FOR DEVELOPMENT

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Teacher Training

A Reference Manual

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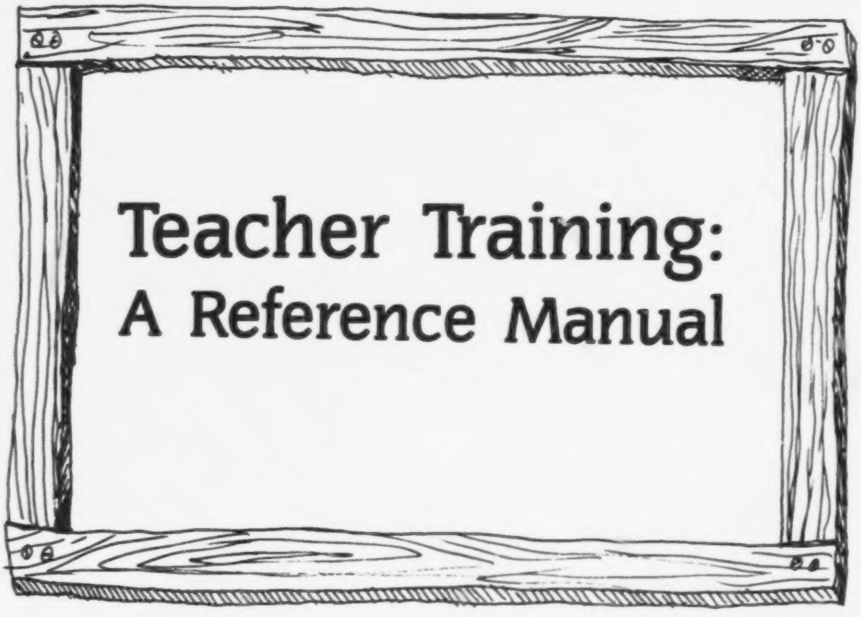

Teacher Training:
A Reference Manual

the Center for International Education

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TABLE OF CONTENTS

ACKNOWLEDGEMENTS vii

INTRODUCTION ix

Peace Corps and Teacher Training ix
Format of the Teacher Training Reference Manual ix
Uses of the Manual xi

CHAPTER 1 WHAT A TEACHER TRAINER NEEDS TO KNOW 1

UNDERSTANDING COMPARATIVE EDUCATIONAL SYSTEMS 3

The Education System 3
The Teacher Training System 4

NEEDS ASSESSMENT 7

ADULT LEARNING 11

Andragogy vs. Pedagogy, 11
Adult Learning - Process and Styles 13
Personal Learning Styles 16
Motivation 16

CONSIDERATIONS IN DESIGNING A TRAINING PROGRAM 19

Defining Program Goals and Objectives, 19
Selecting Topic Areas 20
Designing Learning Activities 20
Training Rhythm and Flow 21
Incorporating Program Evaluations 24
Analyzing Training Constraints 25

TRAINING TECHNIQUES 27

Ice Breaker 27
Brainstorming, Lecturettes 28
Demonstrations, Games/Simulations/Structured Experiences 29
Small Groups (Diads, Triads and More), Role Play 30
Fishbowl 31
Field Trips, Interviews 32
Panels, Case Studies 33
Critical Incidents, Micro-teaching 34
Peer Training 35

SUPERVISION 37

- Clinical Supervision 37
- Observation 41
- Observation Techniques 41
- Data Collection 44

FINAL CONSIDERATIONS 47

- Assessing Personal Training Constraints, 47
- Reassessing Teacher Needs 47

CHAPTER 2 WHAT A TEACHER NEEDS TO KNOW 49

UNDERSTANDING THE EDUCATIONAL PROCESS 49

NEEDS ASSESSMENT, AIMS, GOALS, AND GENERAL OBJECTIVES 51

APPROACHES TO TEACHING 53

- Sources of Teaching Approaches 53
- Summary Chart of Approaches 54
- Choosing an Approach 56
- Recent Research in Teacher Effectiveness 57
- Adapting Teaching Approaches to the Cultural Setting 58

CHILD AND ADOLESCENT LEARNING 61

- Developmental Theories 61
  - The Cognitive Domain (Piaget and Bruner) 61
  - The Affective Domain 67
  - The Psychomotor Domain 68
- Information Processing 69
  - Basic Sensory Perception 69
  - Learning Styles 70
- Grouping Strategies 71
- Considerations in Cross-Cultural Settings 72

SUBJECT-SPECIFIC CONSIDERATIONS 75

INSTRUCTIONAL OBJECTIVES 77

- Writing a Complete Objective 77
- Categories of Instructional Objectives 78
- Verbs to Use in Writing Objectives 80
- Avoiding Errors in Stating Objectives 82
- Subject-Specific Verbs 83

LESSON PLANNING 87

What Teachers Say About Planning 87
What's In a Plan 89
Planning Daily Lessons 90
Writing a Lesson Plan 91
Lesson Plan Format 92
Sequencing and Long-Range Planning 93
Choosing from Alternatives 94

CLASSROOM TEACHING TECHNIQUES 97

Teacher-Centered and Student-Centered Techniques 98
Teacher-Centered Techniques 99
    The Lecture Method 99
    Question and Answer 100
    Recitation and Drill 103
Student-Centered Techniques 104
    Small Group Formation 104
    Brainstorming 105
    Role Play, Games and Simulations 106
    Drama and Music, Field Trips 107
    Individualized Learning and Student Projects 108

INSTRUCTIONAL MATERIALS DEVELOPMENT AND RESOURCE UTILIZATION 111

Instructional Materials and the Learning Process 111
Using What is Available 114
Producing Educational Materials 117
Using Materials in the Classroom 120
Evaluating Instructional Materials 122

CLASSROOM MANAGEMENT 125

The Physical Aspects of the Classroom 126
Curriculum Design Considerations 127
Expectations and Limits 127
Support Systems 129
Teacher Attitude 129
Teaching Routines 130
Teacher on Stage 130
Addressing Individual Needs 131
Handling Discipline Problems 132
Using the Least Amount of Necessary Discipline 133

ASSESSMENT OF STUDENT LEARNING 137

Assessment Techniques 137
Choosing an Assessment Technique 138
Testing 139
Constructing a Test 140
Administering a Test 145
Scoring a Test 147
Analyzing Test Results 149
Implications for Instruction 153

SELF-ASSESSMENT 157

REVIEWING THE EDUCATIONAL PROCESS 159

CHAPTER 3 COLLABORATION 161

TAPPING HUMAN RESOURCES 162

In-Service Training Workshops and Conferences 162
Advisory Groups 163
Classroom Observation/Critiquing 163
Team teaching 164

TAPPING AND DEVELOPING MATERIAL RESOURCES 165

INFORMAL COLLABORATIVE ACTIVITIES 166

COLLABORATION SKILLS 167

Organization 167
Communication 170
Feedback/Critiquing 170
Working in Groups 172
Leadership and Authority 174
Networking 175

APPENDIX

Flanders' Interaction Analysis (from Chapter 1 - Supervision)
Developmental Profile (from Chapter 2 - Child and Adolescent Learning)
Lesson Plan Format (from Chapter 2 - Lesson Planning)

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A participatory team approach was used to produce this set of resources for teacher trainers. We are grateful to the following Content Specialists who contributed their knowledge and expertise by researching and writing on selected topics: Jane T. Benbow, Paul Englesberg, Robert Fuderich, Marilyn Gillespie, Mohammed Farah A. Good, Dawn Gordon, Mark Lynd, David S. McCurry and Douglas Passanisi.

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Bonnie B. Mullinix
Project Manager/Managing Editor

INTRODUCTION

Peace Corps and Teacher Training

The first of Peace Corps's three stated goals is "to help developing countries meet their needs for trained manpower." Analogous to this goal is the ancient proverb (and commonly-cited Peace Corps philosophy):

> If you give people fish, they will eat for a day;
> if you teach them how to fish, they will eat for
> a lifetime.

Peace Corps teacher training aims to do just this -- in this case, to train enough local teachers to meet a country's teaching needs. This is an important first step in freeing countries from their reliance on Peace Corps and other expatriate teachers.

Currently, about 25 percent of Peace Corps Education Volunteers are involved in teacher training activities. These activities take many forms and occur all over the world. In the formal sector, Volunteers are working with national teacher training colleges, state universities and national ministries or agencies to train host country counterparts in a wide variety of subject areas. These areas range from English as a Foreign Language (EFL) methodology, to math and science education, to physical education, special education and primary education.

In the informal sector, Volunteers are organizing and designing their own teacher training programs. Whether these programs are set up as after class activities at the Volunteer's school, as quarterly training workshops in rural village cluster areas, or as an integrated part of the school's teaching routine, the result is that information and innovative methodologies are transmitted to remote areas all around the world.

Format of the Teacher Training Reference Manual

This Teacher Training Reference Manual is designed to help Volunteers to carry out their assignments by supplying a useful and accessible resource for those involved in teacher training. The Manual is designed to be used with the Teacher Training Guide that accompanies it. The Teacher Training Manual provides the Volunteer with a source of detailed information while the Teacher Training Guide gives the Volunteer a model for how the information can be applied to an actual training program (see the Introduction to the Training Guide for a more detailed description of the levels of training addressed).

The Teacher Training Reference Manual consists of three major parts: an introduction, three content chapters, and an appendix. The first, this **Introduction to the Manual**, gives the Peace Corps Volunteer an idea of why teacher training is an important development strategy and discusses the different ways in which this manual can be used.

Chapter 1, **What a Teacher Trainer Needs to Know**, prepares the Peace Corps Volunteer for his/her role as a trainer of teachers by discussing:

- Differences between the educational system of their host country and that of the United States
- The whys and hows of conducting a needs assessment
- Adult learning styles
- Steps and considerations in designing training programs for teachers
- Training techniques
- Supervision and observation techniques
- Final Considerations

Chapter 2, **What a Teacher Needs to Know**, is meant to guide any teacher through some of the important aspects of teaching that affect both how the teacher prepares to teach (before class) and how he/she actually conducts a class (in class). These aspects include:

- Models of teaching
- Child and adolescent learning
- Instructional objectives
- Lesson and unit planning
- Classroom teaching techniques
- Materials development and resource utilization
- Classroom management
- Student assessment
- Self-evaluation and improvement

This chapter is designed to be used either:

- as refresher material for Volunteers who need a quick reminder of the issues involved in effective teaching, or
- as content reference material for actual teacher training sessions.

The third chapter of the Manual: **Collaboration**, discusses support and networking issues that are important for the host country teacher, the teacher trainer, and also the Peace Corps Volunteer teacher. These include:

- Formal and informal channels to tap human and material resources,
- Specific collaborations skills:
  - Organization
  - Communication
  - Feedback and critiquing
  - Working in groups
  - Networking

Each chapter and section of the Manual presents theoretical and practical information for the trainer or teacher to consider. This information is followed by an **ACTIVITY BOX** that is designed to help the trainer or teacher trainee apply the ideas presented in the section. In some cases this involves reflection or application of ideas presented, in other cases it addresses adaptation of those ideas to the cultural context in which the trainer/teacher finds him/herself. In general, this format is meant to help the reader apply and adapt the generic information presented in this Manual to their specific situation. The second chapter contains boxes that highlight points **For the Teacher Trainer** to note. Since the information provided is often brief and merely an overview of a given topic, **References** have been provided at the end of most sections for the individual who would like a more detailed presentation of a given topic.

The Appendix contains a collection of full-sized forms (Observation charts, Lesson Plan formats, etc.) that the trainer can distribute to teachers during a training session or use him/herself. Also included is a List of Charts and Illustrations that can be found throughout the Manual.

Uses of the Manual

This Manual is designed to be used with the Teacher Training Guide in the following ways:

- First, it is a reference to be used in pre-service or in-service training programs for Peace Corps Volunteers who are assigned to be teacher trainers. In this context, chapters 1 and 2 of this manual will be used to introduce:

    a. the training skills Peace Corps Volunteers need in order to design and implement effective teacher training programs, and

    b. the teaching skills and information they need to transmit to the host country teachers they will train.

- Second, it is a resource manual for the Peace Corps Volunteer to use when training host country teachers. Chapter 2 serves as a source of information and handouts for his/her teacher training sessions, while chapter 1 is on hand to remind the Volunteer of what the trainer needs to know.

When using this Manual to train Volunteers as teacher trainers, emphasis should be placed on the cross-cultural considerations in adapting information to the Volunteers' host country. Differences in

U.S. and host country educational systems and between teaching children and training adult teachers should also be stressed.

Volunteers working in formal teacher training institutions may find the theoretical sections particularly useful as supplementary background information for their institution's present teacher training curriculum. Volunteers providing more informal peer training workshops may choose to focus on more practical, in-class applications. Whatever the context, the teacher trainer should feel free to adapt and reorder the information included in this manual to conform to the cultural and educational context of his/her country of assignment.

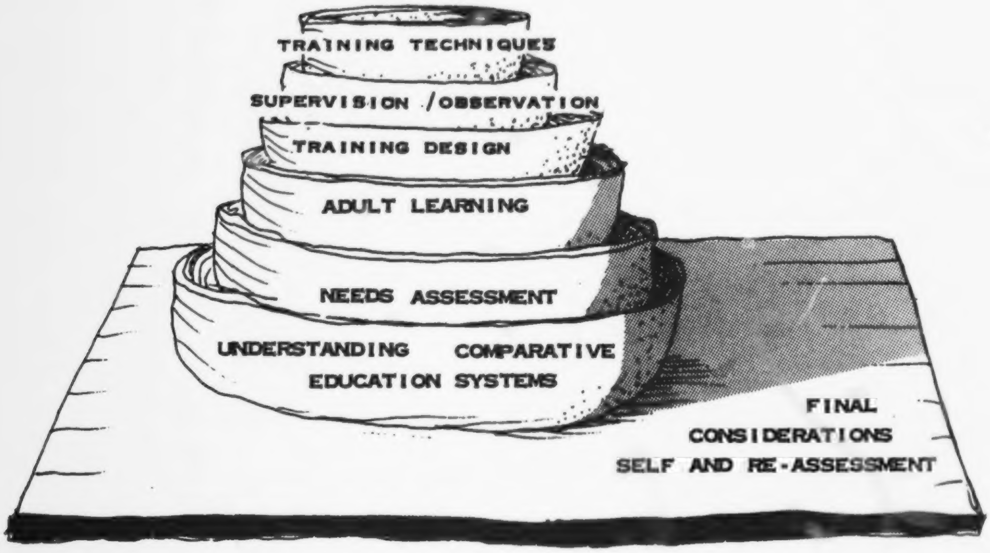
CHAPTER 1

WHAT A TEACHER TRAINER NEEDS TO KNOW

CHAPTER 1 WHAT A TEACHER TRAINER NEEDS TO KNOW

In preparing yourself to be a teacher trainer, there are a variety of things you need to be aware of. As a Peace Corps Volunteer, you must recognize that you are entering a culture and education system that is often dramatically different from your own. In addition, any knowledge you have of teaching children will have to be adapted and reconsidered before you can begin to train adult teachers. You will need to become skilled in the areas of needs assessment, training design and implementation of training programs. In addition, you will have to develop your skills as a supervisor of teachers.

It may help to think of this chapter as a series of baskets, stacked one inside the other. Each basket serves as a container for the next, giving it a place to sit and a broader context and point of reference. Each basket also contains certain skills that you need to master to be a successful trainer of teachers.



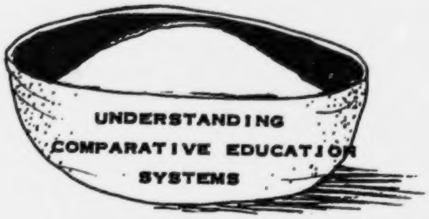
The largest basket represents your personal understanding of education in the host country. The next basket (set inside the context of the education system) represents needs assessment - or discovering the training needs of the teachers. The next basket represents information about adult learning and surrounds and supports the basket which addresses how to design a training program. The final baskets represent the specific skills you need to implement a successful teacher training program: training techniques and supervision skills. Having started from the general context of an educational system and moved to the specific aspects of a training program, this chapter concludes by stepping back and examining a key aspect of your success as a trainer - your ability to quickly and accurately assess personal skills, knowledge and abilities and those of the teachers you are training.

Chapter 1 will be spent developing the skills that fill these baskets. These skills, added a bit at a time as topics are explored within each section, can be referenced by the trainer according to which basket they are in. The trainer should also remember that these sections are not isolated baskets of skills, but are part of a series of containers that have a contextual relationship with each other. The individual who can design a training program but knows nothing of the educational context, teacher training needs or training techniques will not be an effective teacher trainer. This chapter will introduce you to each of the areas and skills you need to be an effective trainer of teachers.

UNDERSTANDING COMPARATIVE EDUCATIONAL SYSTEMS

UNDERSTANDING COMPARATIVE EDUCATIONAL SYSTEMS

The Education System



As a Peace Corps Volunteer and a product of the American educational system, you need to look carefully at the system you now are entering before you can consider training within it. As you begin this process, you need to be aware of your personal biases towards education and open to other approaches and contextual constraints. Innovative techniques and free and universal education are admirable goals which may or may not address the needs of an overpopulated, understaffed educational system, with limited resources struggling to meet the educational and manpower needs of its society. Some of the things you should consider as you look at the educational system of your host country include:

o	Stated goals and philosophy of education	(What should it do?)
o	The organization and structure of the educational system	(What does it look like?)
o	The values assigned to education and the role it plays in the society	(What does it do?)
o	The preparation and training of teachers	(Who does it? What do teachers know?)
o	The status and role of teachers in the culture/society/community	(What rewards/other duties do teachers receive/have?)
o	The motivation and aspirations of students	(Why do students go to school?)

One of the ways to approach these vague and often elusive concepts is to think of them in relation to what you know best - your own education system. (The Activity Box at the end of this section will help you compare these two systems - the one you are coming from and the one in which you will be working.)

As you make this comparison, consider how you feel about each system as, ultimately, your attitudes toward the educational practices and norms of your host country will have a significant effect on how you conduct training and interact with host country teachers.

If you have been in your host country for some time you already have an idea of how the educational system functions and will be able to easily conduct this informal comparison. If you have just arrived, you may want to consult with people in your training program who have been working in the educational system for a few years. Your technical trainer may provide you with relevant information or direct you to any of the following information sources:

Who:

- Ministry of Education personnel
- Official Written Documents
- Host Country Teachers
- Head Masters/Principals
- Students
- Teacher Trainers
- Fellow Volunteers
- Technical Trainers
- Community Members
- Other Informants

How: Interviews, Reading and Research, Meetings, Observation, etc.

The Teacher Training System

Having developed this information network, and begun to realize where it is you are working, it is time to ask some specific questions about how teacher training is conducted in the host country. If you like, draw yourself another comparative chart and ask these questions of both the U.S. and the country in which you will be working. The main points you should consider in analyzing teacher education in your country are:

1. What does teacher education look like in your country? What is the structure, general content, etc.?
2. Who receives teacher preparation?
3. How long does it take? (for different levels and settings)
4. Where and when does it occur? (in teacher training colleges, in-service workshops, etc.)
5. How are teachers taught? (what is the standard pedagogical approach?)

There are probably many more questions you can ask to help familiarize yourself with the traditional teacher training context, but this can serve as a starting point. Each time you begin a training program, take some time to refer to your original notes, review them and add to them. They will serve as a reminder and highlight points that you might have begun to take for granted.

ACTIVITY BOX

The following chart will help you to compare the U.S. and host country systems of education. Take a minute to complete it.

Aspect	United States	Host Country
Curriculum Development		
Curriculum Content		
Administrative Structure		
Educational Ladder/Structure		
Evaluation - Student Assessment - Student Advancement grade to grade primary to secondary.		
Access to Education		
Role of Language - National/Official - Mother Tongue, First, Second		
Material Resources available to Teachers/ Students		
Classroom Environment - Style of presentation - Physical set-up/variety - Approach to discipline - Number of students		

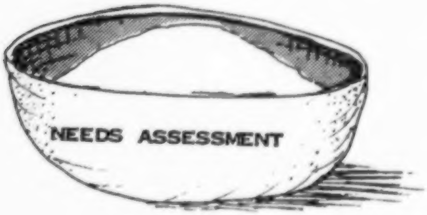
As you complete the above chart, consider the following questions:

1. Locus of Control: Who is responsible for deciding/controlling ______________ ? (The **national** government or Ministry of Education, The **region**, state, or district; the **local** community or school system; the **principal** or Headmaster of the school; the **teacher**.

2. Influence of Religion
3. Integration of Culture
4. Any other relevant variables.

ASSESSMENT ______________________________

NEEDS ASSESSMENT



Now that you know something about how teacher training is conducted in your host country, you are ready to begin thinking about training teachers. The first step in designing a training program is to determine what it is that the participants (in your case, the teachers) need to know. This process is referred to as a needs assessment. The purpose of a needs assessment is to gather two key points of information and, using the formula below, determine the needs of the teachers you will train. You need to determine: What the teacher is required/expected to know and what they already know. This will give you an idea of what they need to learn in your training program.

KNOWLEDGE AND SKILLS EXPECTED/REQUIRED (What the teacher should know)	—	KNOWLEDGE AND SKILLS POSSESSED BY TEACHERS (What the teacher knows)	=	KNOWLEDGE AND SKILLS NEEDED BY TEACHERS (What the teacher needs to know)

The following chart will help you address important competency areas for teachers by providing key questions in each of them.

Competency Area	Standards/Expectations	Teachers' Present Status	Teachers' Needs
Subject Matter	What subjects are teacher trainees responsible for? What academic background is the teacher supposed to have (minimum qualifications)?	Do the teachers have the minimum qualifications to teach the subject? What are their academic backgrounds (upgrading/ degrees)?	What content areas would the teacher trainees like to cover?
Lesson Planning	How much lesson planning is required of the teacher? How much of the curriculum does the teacher have control	What are the teachers strengths and weaknesses in the following areas: - writing objectives	What lesson planning skills would the teacher trainees like to learn?

Competency Area	Standards/Expectations	Teachers' Present Status	Teachers' Needs
Lesson Planning (continued)	over and how much is handed to them? Is there a particular form or format suggested for use by teachers?	- developing materials - pacing lessons - sequencing ideas and techniques?	
Classroom Teaching Techniques	What techniques are considered acceptable, effective or appropriate in the school/system where the teachers will be teaching?	What is the range of techniques understood and practiced by the teachers (see **Classroom Teaching Techniques** in chapter II for a list of techniques)?	Which techniques would the teacher trainees like to learn?
Classroom Management	What are the cultural expectations of both teacher and student behavior/interaction in the classroom? What are the standard, acceptable disciplinary and management approaches?	What are the teachers' classroom management styles? Are they able to: - keep students' attention - maintain order - use verbal and non-verbal cues effectively?	What problems do the teachers identify for themselves? Where would they like to see improvement?

The next steps involve finding the answers to these questions. This means that you need to know where to go, who to see and how to gather the information. Some suggestions for information sources and data-gathering techniques for each of the three areas are listed below:

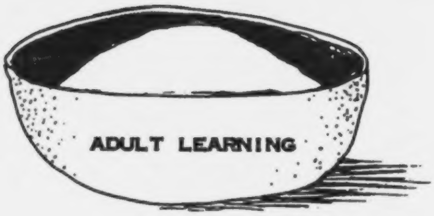
Possible Sources of Information	Ministry of Education personnel, written documents from the government, school administrators, teachers, other informants	School administrators, other teachers, the teachers themselves, students, other informants	The teachers themselves
Methods of collecting information	Interviews, reading official government or school documents	Observation, interviews, meeting questionnaires	Questionnaires, informal interviews

ACTIVITY BOX

1. Make a list of all the people (by title and/or name) you need to consult in order to design an in-service teacher training program.
2. Make a list of the questions you would ask each of the above people. Try to write these in the form of a short questionnaire or an interview guide.
3. Conduct a mini-needs assessment in your school or with colleagues aimed at developing a weekend workshop for teachers and/or administrators.

EARNING ____________________

ADULT LEARNING



The new teacher trainer often moves directly from teaching children to teaching adults. Unfortunately, too often the teacher merely continues to teach in the same style though the audience has changed. The teacher trainer (and the trainer of teacher trainers!) must be conscious of the fact that adults have different learning needs and styles than do children or adolescents. The following is both a brief overview of some of these differences, and a few suggestions on how to most effectively work with adult learners.

It is essential that you as a teacher trainer are aware of the many factors involved in adult learning. Significant differences exist between the training of teachers and teaching in the classroom. This section will explain some of the important considerations in adult learning that a trainer must know and certain techniques which can be used to facilitate that learning. Remember that the following descriptions are not meant to be considered as rules but rather as guidelines to help you design and implement effective learning experiences for the teachers you will be training. Once in the field, you will undoubtedly find different approaches and should be able to tailor your own training techniques to any cultural context. The objectives of this section are to help the teacher trainer be able to:

1. Describe the differences between adult and child learning.
2. List and describe the four key stages in the learning process.
3. Identify four distinct learning styles.
4. Discuss the relationship between various motivational levels.

Andragogy vs. Pedagogy

It is important to understand that as a teacher trainer you are working with adults. Too often the assumption is that everyone learns in the same way, yet adults approach learning quite differently from children and need to be taught differently from children. The technical words to distinguish these different approaches to teaching are andragogy, or the science of teaching adults, and pedagogy, the science of teaching children.

Malcolm Knowles in his book The Modern Practice of Adult Education identifies the following four concepts that characterize the adult learning process:

1. Self-concept. Whereas the child is dependent upon those around him/her, the adult acts autonomously in relation to others. Adults are capable of being self-directed, of being able to identify and articulate what they want to learn in dialogue with the teacher. In pedagogy, the teacher is in a directing relationship with the student; in adult education, on the other hand, the teacher is in a helping relationship with the student.

2. Experience. With children, education is often the one-way transfer of data and information from teacher to the student. This is not always appropriate for the adult learner who brings a wealth of experience and wisdom into the learning environment. In adult education, the teacher is more often a facilitator in a mutual learning environment. Thus, the focus is on experiential methods such as small group activities, role playing, and other techniques that will be discussed later in this section. The dichotomy between teacher and student is replaced with a community of learners and teachers.

3. Readiness to learn. In traditional pedagogy, the teacher decides what the students need to learn and the curriculum is developed apart from the learner. This does not suggest that students should not be involved in generating objectives and learning experiences, only that the initial curriculum has already been established. In andragogy, the learner takes a much more active role in deciding what will be taught and when. Adult education is more learner centered. As noted before, adults often are able to identify their own needs as they arise from their social/cultural situations. In adult education, it is important that the content of educational programs is directly related to both the adult learner's interests, life situations and working capabilities.

4. Orientation to learning. The adult learner has a different orientation to learning than the child. Children have been conditioned to have a subject-centered orientation to learning whereas adults tend to have a more problem-centered orientation. The key difference is one of time perspective. Children are able to focus attention towards future rewards while adults are primarily concerned with their present situations and interested in solving problems they experience on a daily basis.

The chart below highlights some key considerations for the adult educator.

Distinctions Between Child and Adult Learning Approaches

Key Ideas	Child	Adult
the learner	generally dependent	self-directed
the educator	defines problem	helps learner solve own problem
primary information source	educator	self, experience
motivation	external	internal
time factors	future	present

Adult Learning Process and Styles

The topic of adult learning encompasses a broad range of issues. Of these, the adult learning process and learning styles are two of the key variables you need to consider as a trainer.

Some of the continuums associated with the adult learning process are:

active and participatory <----------------> passive

shared responsibilities <----------------> trainer responsible

shared access to knowledge <----------------> trainer access to knowledge

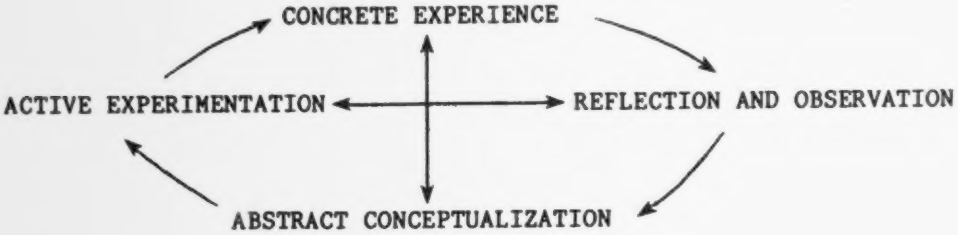
learning how to learn <----------------> learning facts

As you review these continuums, place yourself on each according to how you prefer to learn. Consider that the adults who you will be training have preferences of their own. The question now becomes how you, as a trainer, can address these differences and still be effective.

David Kolb, an adult educator, has developed a model which integrates an experiential learning process with learning styles and provides a comprehensive model for the adult educator. This model begins by describing four key steps in the learning cycle and provides a clear method for you to consider while training. Since adult learning is heavily based on experience, Kolb suggests the following types of learning that make up the adult learning process:

1. Concrete Experience: The learner is involved in a concrete experience that is provided in training. The learner explores a new situation firsthand. The learner learns by demonstration, explanation, lecture, and the giving of facts by the trainer.
2. Reflection and Observation: The learner maintains concrete involvement but distances self, becoming reflective observer - takes a step back to observe and reflect on what the situation means to him/her. Learning takes place through question and answer periods, discussion, or individual time for reflection and work.
3. Abstract Conceptualization: Based on reflection, the learner analyzes the situation and forms theories, generalizing from the particular to the hypothetical and general. Interaction with peers and the trainer helps the learner analyze situations.
4. Active Experimentation: The learner formulates a plan or strategy to apply the newly attained information to his/her own situation. The learner needs to discover for him/herself the application of knowledge.

This experiential learning cycle can be represented as follows:



These stages represent both process and learning styles. The process suggested here roughly reflects the developmental stages of children - the higher level cognitive processes coming at a later age (see **Chapter 2, Child and Adolescent Learning** for more detail on cognitive development). The important thing to remember is that this is not a definitive four step process. Each of these stages involves some overlap, interaction and flexibility. A creative tension exists between Active Experimentation and Reflection and Observation that, if nurtured, helps the learner's experience to be complete. This is equally true for Concrete Experience and Abstract Conceptualization.

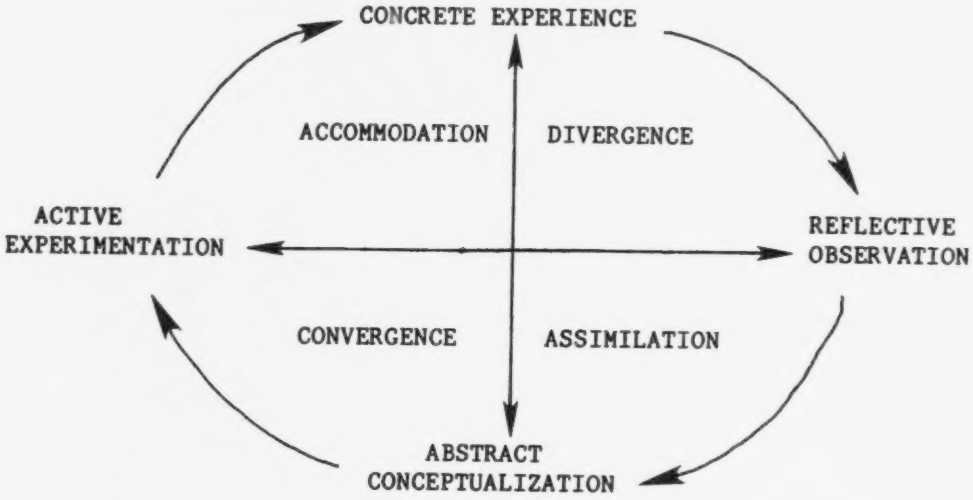
Learners who feel most comfortable immersing themselves in an experience may be the ones who most need to be drawn back occasionally, and helped to conceptualize their experience (and visa versa). The creative tension that exists between these opposites means that people have a tendency, even in childhood, to gravitate towards one end or the other of each continuum (vertical or horizontal axes) of this model. By the time they are adults, they have firmly established their preferred way of learning and may not wish to move through this process in a stage by stage manner.

Your job as a trainer is to design your training programs so that they address each of the stages in the learning cycle. In this way you will not only address each participant's learning preference, you will help participants to expand their skills in dealing with different learning situations and support the creative tension that is inherent in the learning cycle as well. Consider as you move around the learning cycle that the active role of the trainer in Concrete Experience is continually diminished to facilitate the active role of the participant by Active Experimentation. By including this range of experiences in your program, not only are you addressing individual learning preferences but you are also helping your participants to experience the range of learning strategies at their disposal.

Having established the adult learning cycle as a process, Kolb goes on to suggest that there are specific learning styles that fall between each step in the process. These are:

- Accommodation - Concrete and active, accommodators tend to emphasize objectives and practical reality over theory.
- Assimilation - Reflective and abstract, assimilators prefer theory to practical application and facts.
- Divergence - Concrete and reflective, divergers are imaginative, emotional and interested in people.
- Convergence - Active and abstract, convergers are more conformist, traditional and authoritarian.

When the above learning styles are superimposed on the experiential learning cycle, you have a model (shown below) that incorporates two of the key aspects of adult learning: learning process and the learning styles.



As a trainer, the model above should remind you that you need to address both the individual and the group. Your training design should take each learner through a process that encourages each stage of the above cycle (experience and thought without application will leave teachers with some nice ideas but no idea as to how to use them in the classroom). It should also recognize and address individual learning styles and at the same time challenge learners to cross boundaries and enter parts of the learning process that they might otherwise ignore.

Personal Learning Styles

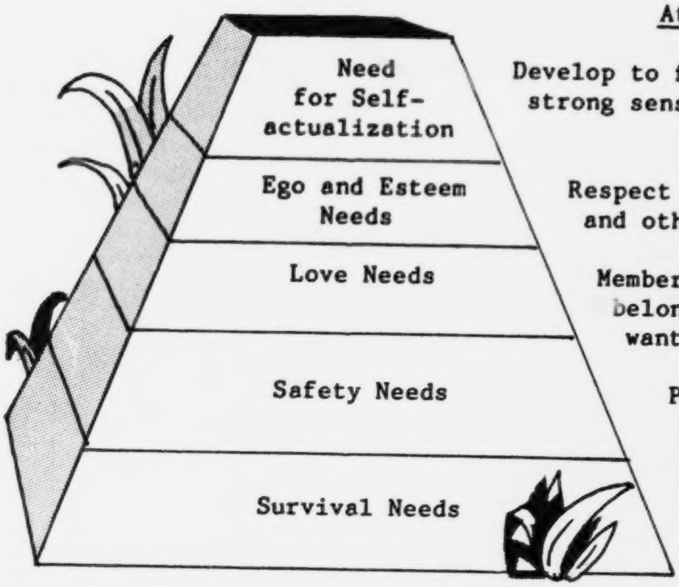
Before beginning your role as a trainer, it is important to further examine your own learning styles (see the activity box below for a suggested approach). Do not underestimate the power of your own preferences towards learning. Your approach to the adult learners you will be training will reflect your own philosophy of learning. It is imperative, therefore, that you be aware of what that philosophy is and how you, as a trainer, are portraying a particular style. The awareness of your own preferences, strengths and weaknesses will allow you to adjust your training style to model a more effective and balanced philosophical approach for the teachers you train.

What exactly is meant by the term modeling'? Throughout your life, you have been influenced by educators that have provided you with certain role models. Your ideas and conceptualization of education have been slowly formulated by your experiences in educational settings. Not only did your teachers present content-specific information to you, but they presented a process of teaching as well. You may not remember what you studied in sixth grade language arts but you may remember how the teacher treated you and your classmates. You may remember mannerisms, how the teacher helped you, whether the class was fun, who sat next to you, if you could express your ideas and if learning was a positive experience. All these considerations are part of the process of teaching and training. In the same way, your own style serves as a model for the teachers you train. If you are successful, they will take out of the training session much more than the mere content you present. They will learn how to use a variety of techniques to create an exciting and challenging learning environment.

Motivation

Motivation is an important part of an adult's ability to learn. Environmental distractions, unmet needs, and personal trauma can divert the learner's attention from the task at hand. Prepared trainers should be able to recognize levels of learner motivation and be ready to adjust their training programs accordingly. Abraham Maslow, a renowned theorist in the field of humanistic psychology, is often cited when discussing the dynamics of human motivation. Maslow suggests that human needs form a hierarchy that can be visualized as a stack of dependent layers; one need level is unattainable until the lower level need is met.

Maslow's Hierarchy of Needs



Attributes

Develop to fullest potential; strong sense of individuality.

Respect and liking for self and others.

Membership, acceptance, belonging, feeling loved and wanted.

Protection from physical or psychological threat, need for order and structure.

Food, water, shelter, clothing, etc.

It is important to note that each need level does not become a major factor in motivation until the lower levels of needs have been satisfied. An individual's position in the hierarchy may change from hour to hour, day to day, or year to year. The learner who has had no breakfast may be biding his/her time to get to the lunch hour, and be wholly uninterested in expending intellectual energy. In fact, some individuals may never reach the highest levels of this hierarchy. As a trainer, if you are able to recognize in which level of this hierarchy the learners are operating in at any given time, you will be better prepared to respond to training problems that stem directly from motivation and needs.

ACTIVITY BOX

1. Consider a content area or subject which you are familiar with. Outline a lesson plan for teaching that topic to a group of children and then, using the same topic, redesign the lesson to be taught to a group of adults. Check to see if you have addressed each of the four concepts of andragogy in your new design. (See Chapter 2, **Lesson Planning**)

2. Review the learning styles above. Identify your personal learning style. Now answer the following questions: Which axes of the learning process are your weakest? Which type of learning situation would support your style? What kind of learning situation would be the greatest challenge? How does your preferred learning style affect your teaching/training, and how can you adjust this affect?

3. Review Maslow's Hierarchy of Needs. Reflect on your needs as they change:

   a. throughout a day
   b. throughout a month
   c. throughout an important year in your life

   How do these changes affect your willingness and motivation to participate in learning experiences.

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CONSIDERATIONS IN DESIGNING A TRAINING PROGRAM

CONSIDERATIONS IN DESIGNING A TRAINING PROGRAM

Now that you have considered ways adults learn, you have the tools necessary to begin designing your training program. This section is primarily addressed to those who are responsible for designing informal or in-service training programs and curriculum. Teacher trainers based at national teacher training colleges may, however, find helpful suggestions for how to adapt the curriculum they have been given to better meet the needs of their learners.

The following is one model that can be used to design training programs. It is intended to be a guide that can be modified or adapted as you see fit and as the situation requires. It is based on six steps:

1. Carrying out a comprehensive needs assessment
2. Defining program goals and objectives
3. Selecting topic areas
4. Designing learning activities
5. Analyzing the program time flow and rhythm
6. Incorporating program evaluation
7. Analyzing training constraints

You have already spent some time conducting (or thinking about how you would conduct) a needs assessment of your teachers. The remaining steps will either be discussed in detail in this section or, where appropriate, you will be referred to other sections of the manual that cover a related topic.

Defining Program Goals and Objectives

Once the needs assessment has been carried out and the data analyzed and evaluated, you must determine what your program is going to be about. This is the step of setting goals and objectives. It is upon these that the content of the program will be based. As the process of setting of goals and objectives for a teacher training program is similar to that for designing classroom curriculum, it is suggested that you see the section in Chapter 2, **Instructional Objectives.**

Selecting Topic Areas

One of the most common mistakes made in the design of any training program is trying to do too much. Your needs assessment will have turned up many potential topics and needs. Relax. You do not need to do everything at once in one program. The key to this step is the ability to prioritize.

The first thing you need to do with the 'raw' data you have collected is to organize it into similar content areas. Then rearrange the aspects or points within that content area into a list, placing the most important areas at the top and the least pressing at the bottom (as you do this remember that all of the data collected in a needs assessment are important to someone). Next, use the same method to prioritize topics within each of the content areas, listing the ones of most immediate training importance at the top. Now step back and look at it, asking and answering the following questions:

- How long will this training program last?
- Is it the only one, or will you have the opportunity to conduct future training programs?
- Do you want to talk in detail about only one content or topic area (e.g. a whole one week training on student assessment) or do you want to address several different topics during the course?
- What is most appropriate at this point in time for both the trainees and the situation in which they find themselves?

Having answered these questions, select the topics for possible inclusion in this training program, and note how much time you wish to spend on each (e.g. a two-hour session, a whole day).

Designing Learning Activities

Now that you have decided what you want to teach, you must decide how you are going to teach it. As noted above in the section on **Adult Learning**, adults learn best when the content is directly related to their reality and based on their own experiences. As a teacher trainer there is a whole 'tool kit' of learning activities available from which to choose. Though talks or lectures are often helpful to get across specific content, eight hours a day of lectures for one week will drive your trainees to distraction or sleep! It is crucial, therefore, to design your learning activities to include a variety of experiential learning techniques.

In the following section are some basic techniques used in training. Look at these and then look at your prioritized list of content topics to be included in the training program. Begin to match content areas with training techniques considering, for instance, whether it is better to use a case study to teach that point or a role play. It is up to you to decide how to write your lesson plan for each session, but an acceptable format has been included in the **Appendix** for your information.

Training Rhythm and Flow

As you begin to match learning activities with your content topics, you must keep in mind how they will all go together. Though these considerations are not as important if you are planning an afternoon or even a one day training, they become crucial for any program that lasts for several days or weeks.

The key to a successful design is the ability to balance a variety of variables. After an initial selection of learning activities, begin to place your activities on a timeline for the period your training is to last. As you do this, consider the following:

- High energy vs low energy: Each day has its high energy and low energy times. High energy times are when participants are refreshed and energetic; low energy times are when you are trying to keep everyone awake. Mornings tend to be high energy and afternoons low, particularly in hot countries with a tradition of heavy mid-day meals and afternoon siestas! (Don't ever try to do a heavy, theoretical lecture after lunch when it's 90 degrees outside!) During the week there are also high and low energy times. There is no way to avoid these times, but a good trainer designs a program keeping them in mind. Do your theoretical sessions in the morning, with the most intense ones early in the week. Then in the afternoons, and even in the time just before lunch, have active, doing sessions; small group work, role plays, case studies, etc. If it is possible to include a field trip or site visit, do it on a Wednesday afternoon to break up your week.

- Academic vs experiential: People learn best not by hearing, but by doing. While it is important for the trainees to learn specific or technical content, be sure to also include activities that involve them in the use of this content. Vary your techniques so that they address each part of the learning cycle (see **Adult Learning**) and remember that, ultimately, five days of role play can be just as deadly as five days of lecture!

- Large groups vs small groups: Both large group and small group sessions have advantages. Large group sessions are good for lectures or demonstrations when you want everyone to get the same information. Small groups are best for discussions and individual participation. Many participants who would never speak in front of a large group of people are very willing to share their experiences or questions with only six or seven others.

- In class vs out of class: If possible, try to include field trips and site visits. These are important not only because they give the needed change of pace pointed out above, but also because they bring a reality factor into the training. If the training is too abstractly theoretical, participants may fear that though the ideas presented are good ones, they could never implement them.

- Serious vs fun: While you want your training program to be taken seriously by participants, this does not mean that it cannot be fun. Include celebrations in your design, especially the opening and closing of the program. If it is a residential program consider how the evenings will be spent; are there movies, town trips, special dinners? If the program is a week or two in length, make sure to included recreational or sports activities. Incorporate something light or fun in each session, even if it is only a two-minute icebreaker.

- Vary the learning environment: Change space as often as possible, even if it means just rotating sessions among a couple of rooms. In a week-long program, people will often †claim' a seat where they remain for the whole time. Shake things up a little. If you cannot move to a different room, then try to change the room you are in by rearranging the chairs, or by putting up new wall decor every couple of days.

- Balancing a Training Team: If you are working in a training team, change trainers as often as appropriate. Each trainer has his or her own style that will appeal to some of the participants but not to others. If one trainer is particularly quiet and soft spoken, have him/her facilitate the high energy times. The trainer who is the joker and extrovert may be more successful motivating participants during low energy training times.

When you have completed your training design and schedule, look at it. Would you want to be a participant in the program? Would you find it challenging yet fun? And if you can answer yes, then chances are you have designed a program that your participants will both enjoy and from which they will learn.

The following is the design and rough schedule for an intensive, in-service teacher training program. Titles of sessions, techniques used and time spent on each technique (in minutes, parenthesized) are shown.

TIME	DAY ONE	MIN	DAY TWO	MIN	DAY THREE	MIN
8:30 – 10:00	INTRODUCTIONS/ EXPECTATIONS	30	CLASSROOM TEACHING		STUDENT ASSESSMENT	
	APPROACHES TO TEACHING		Reflective conversation	20	Test writing and scoring exercise	50
	Individual work	5	Lecturette/ Demonstration	20	Discussion	10
	Role play	35	Discussion	20	Test-taking activity	10
	Small groups	20	Card game on types of questions	20	Discussion	10
	Large group Discussion	20	Review of teaching techniques	10	Brainstorm	10
	Mini-Lesson	10				
10:00 – 10:30 (Break)						
10:30 – 12:00	CHILD & ADOLESCENT LEARNING		TECHNIQUES (cont.)		MICRO-TEACHING	
	Ice breaker	10	Small group exercise	30	Icebreaker	5
	Lecturette	20	Report out	20	Introduction	5
	Discussion	10	Writing a Song	20	Small group/ presentations	80
	Case study	40	Closing Reflection	10		
	Game	5				
12:00 – 1:00 (Lunch)	Lunch		Lunch		Lunch	
1:00 – 2:30	INSTRUCTIONAL OBJECTIVES		MATERIALS DEVELOPMENT		MICRO-TEACHING (cont.)	
	Ice Breaker	10	Creation of visual aids	30	Small group/ presentations	80
	Lecturette	10	Triads	20	Final reflection	20
	Needs assessment		Brainstorm	10		
	Brainstorm	10	Final discussion	30		
	Small groups	25				
	Discussion	30				
	Individual work	5				
2:30– 3:00 (Break)						
3:00 – 4:30	LESSON PLANNING		CLASSROOM MANAGEMENT		COLLABORATION	
	Introduction	5	Critical incidents	20	Puzzle exercise	15
	Small groups (pairs)	20	Discussion	20	Discussion	15
	Small groups of four	15	Values Clarification exercise	30	Lecturette	10
	Groups of eight	15	Final discussion	20	Small groups	30
	Large group reflection and discussion	15			Closing reflection	20
	Individual work	20				
4:30 – 5:00	Evaluation	30	Evaluation	30	SUMMATIVE EVALUATION OF TRAINING PROGRAM	30

Incorporating Program Evaluation

Your training should be under constant evaluation by you and by the people you are training. The two main types of evaluations that you will want to conduct are:

Formative evaluations: Evaluations that take place while the training is in progress. These evaluations can occur daily, weekly, at the end of a particular topic area, or at the end of every session. Formative evaluations can be in the form of a questionnaire or can be done informally in a group or through dialogue with participants. Perhaps the most effective way is to use a variety of methods so that you are sure you gather input for improving the training program that might otherwise escape you.

Summative evaluations: Evaluations that take place at the end of a training program. They specifically address whether goals, objectives, and expectations have been met, whether the training methods addressed the participants' learning styles, and all other aspects of the training that might affect the participants' learning (including logistical aspects such as food, facilities, etc. - all of which should be dealt with in formative evaluation sessions as well). Summative evaluations give participants the opportunity to offer feedback to the trainer and suggestions and comments for future teacher training sessions.

The purpose of evaluations is three-fold:

1. to better facilitate the learning experience for the participants;
2. to help the trainer improve his/her training designs and skills; and/or
3. to determine how cost effective and successful the training program was overall.

Methods of evaluating a training program are numerous and range from simple open discussion to detailed questionnaires. Here is a brief list of selected methods that can be used to evaluate a training program:

- Group brainstorm of program strengths and weaknesses (Itemized-Response Technique), with or without prioritization.
- Individual response to open-ended questions.
- Paired or shared group informal feedback (guided or unguided).
- Participant created skit, award ceremony or other closing activity that summarizes and comments on key aspects of the training.
- Group or paired completion of trainer prepared questionnaire.

- Individual written response to a questionnaire (using open and/or closed ended questions, comments, yes/no, or scaled (1-5) type items).

As you choose the evaluation method and design the tools to be used, remember to consider: What it is you want to know and why you want to know it (i.e., what will actually be done with the information you are collecting). If this is the only training program of its type that will ever be conducted, perhaps the evaluation should be informal and aimed at having participants review and plan to apply the information covered. If it is one in a series of programs, a formal written questionnaire may serve as the best record of program strengths and weaknesses.

Analyzing Training Constraints

Before you are truly ready to implement your training design, you need to consider and reconsider the obstacles you may encounter. The following questions (and others) must be answered and dealt with in your design before you can think about implementing it.

- WHO: What human resources do I have to conduct the program? (Will I be doing it alone, or will I have money to pay someone else, or have some assigned help? Are there other qualified people to assist me? Are there people in the community who may play a part? Could this include other Volunteers?)

- WHERE: Where will the training be located? Where is the most cost efficient and convenient place? (Of course you may not always have the choice.) Will I need to distribute money for travel expenses or provide transportation? Will I have to provide lodging and money for food?

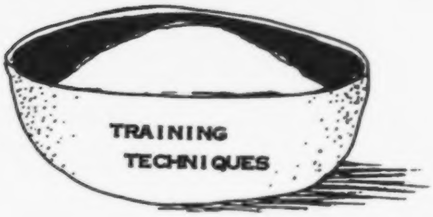
- HOW MANY: Given the staff available, and the facilities and available time, how many teachers may I realistically and effectively work with?

- HOW MUCH & WHAT: What financial and other material resources do I have? What teaching aids are or can be made available? (Are there specific teaching materials such as books and texts that are needed?) What materials have to be made and how do I make them/copy them? Are there any visual aids, overhead projectors, videos, etc. available at the training site? (See Chapter 2, **Materials Development and Resource Utilization** for more details in this area).

ACTIVITY BOX

1. Make a list of all of the people who might have input into your training program. Indicate how you would contact them, what information they might provide and what role would they play in the training program.
2. List the key obstacles or constraints you might expect to encounter as you design an in-service teacher training program. Note down how you would adjust for time, logistical, cost, etc. constraints in your training design.
3. Use the needs assessment information (hypothetical or actual) that you gathered in the previous section to design a training program you can implement when you return to your site. As you design the program, keep each of the six major considerations of program design in mind.

TRAINING TECHNIQUES



In order to develop a training design which responds to the diverse learning styles of your teacher trainees and one which is appropriate for the material you will present in your training sessions, you need a variety of training techniques at your disposal.

While by no means an exhaustive list, the training techniques discussed below are the ones most commonly used by trainers. Because they can be used by classroom teachers as well, it is important that you correctly model these techniques in your training sessions. (The adaptation of these techniques to the classroom setting can be found in Chapter 2, **Classroom Teaching Techniques.**) As you develop your training design, remember that your success in using these techniques will depend on your ability to adapt them to meet the needs of your teacher trainees and the cultural context in which you train.

1. **Ice Breaker:**

Purpose: To help participants feel at ease with each other and comfortable in the new learning environment where you are training. It also establishes group rapport. As its name implies, it warms the learning environment to the point that the 'ice' keeping participants from interacting with each other is broken up.

Description: An ice breaker generally involves all participants in an active role. It sets the tone for the training by creating a non-competitive environment, so that participants can interact with each other without feeling threatened. Ice breakers should be fun and attempt to create a bond between trainer and participants that can be strengthened during the rest of the training program. An example might be:

a. Randomly pair-off participants.
b. Have participants work in pairs and find out as much about each other in five minutes as possible.
c. Each participant then introduces his/her partner to the rest of the group.

Since ice breakers can often incorporate games, unorthodox activities or close physical contact between participants, it is important to keep in mind (as with all of these techniques) what is appropriate to the culture and context in which you will be training.

2. Brainstorming:

Purpose: To elicit a wide range of ideas and information from participants. To tap the experience and expertise of the participants.

Description: All ideas and experiences generated by participants are collected and recorded without the threat of judgement or criticism. Brainstorming is used to help focus or clarify activities or a content area. This technique also promotes creativity and finding solutions to problems. Brainstorming is particularly effective in opening sessions to establish goals, objectives, expectations and norms (rules) for the training program.

Process:

a. The trainer tells the group that the purpose of the exercise is to elicit as many ideas as possible about a particular topic.
b. Participants are invited to call out as many ideas as they can possibly generate about the topic being investigated. They are asked to draw upon personal experience and opinion, be creative and imaginative. (At this point no ideas are rejected or analyzed - everything offered is accepted and encouraged).
c. Trainer writes all ideas down on newsprint, board etc. for all to see
d. After ideas are generated, the group discusses and analyzes the information collected. At this time, the trainer can ask each person to clarify points they have made that are unclear to the group.
e. The trainer then helps to group and prioritize ideas. This can be done by consensus, vote, or compromise.
f. Through this process of prioritization, the trainer helps the group identify key ideas for the group to pursue or further investigate.

Note: The trainer should make sure that the ideas generated during the brainstorm are then used during the next parts of the training. Unused Ideas will leave the participants feeling as if they have wasted their time.

3. Lecturettes:

Purpose: To provide participants with specific information and/or set the stage for an experiential activity.

Description: Lecturettes are short forms of a lecture which are used to highlight key points of content. They differ from traditional lectures in that they often incorporate participant interaction and, at times, give the impression of a discussion. Useful as introductions to topics and 'lead-ins' to experiential activities, lecturettes seldom last longer than 15 minutes.

Process:

a. Trainer prepares outline of lecturette and supporting instructional materials.
b. Key information is presented to participants.
c. Trainer solicits information and/or questions from participants.
d. Trainer allows discussion of unclear points.
e. Trainer summarizes, concludes and proceeds to next part of the session.

4. **Demonstrations:**

Purpose: To allow participants to witness a procedure or an act. This demonstration can then be practiced by participants and supervised by the trainer.

Description: A demonstration brings to life some information that has been presented in a lecture, discussion, or explanation. For example, a discussion of a particular training technique may not be as effective as a direct demonstration of that technique that participants can both experience and/or apply themselves.

Process:

a. Trainer explains the purpose of the demonstration.
b. Trainer demonstrates procedure or new behavior.
c. Participants ask questions, engage in discussion.
d. Participants practice with trainer/peer supervision.

5. **Games/Simulations/Structured Experiences:**

Purpose: To allow participants to participate in a structured educational experience that approximates a real life problem or situation.

Description: Games, simulations and structured experiences take a great deal of planning and require a high degree of familiarity with the subject matter. In designing these learning experiences it is important to have clearly stated learning objectives and a design that ensures that the desired learning outcomes are reached. Generally, games or simulations ease anxieties or fatigue and are sometimes most effective at the end of a session or at the end of the day. (For specific applications in the classroom, refer to the section on **Classroom Techniques**)

Process:

a. Trainer explains procedures involved activity (where appropriate, trainer demonstrates procedures).
b. Participants are encouraged to be spontaneous and have fun.
c. Game/simulation/structured experience is carried out.

d. Activity is analyzed and discussed highlighting possible adaptations for use of technique by teachers in their classroom.

6. Small Groups (Diads, Triads, and More):

Purpose: Small groups of approximately two to seven are used to help share ideas and bring individuals together for discussion or problem solving. The smaller the group, the greater the chance of individual participation.

Description: Grouping is an essential part of training and can be used by the trainer to either bring people together randomly, to have teachers of the same school or school district solve problems together, or to discuss opposing views or methods with colleagues. The trainer may ask the participants to choose partners or assign partners according to the criteria suggested above. The trainer can use this technique for in-training participation or to establish working groups for outside training assignments. Possible tasks might be writing objectives and lesson plans, curriculum design, analyzing situations or reporting.

Process:

a. One task is assigned to all groups or a different task is assigned to each individual group.
b. The purpose of the tasks is clearly stated and a time limit imposed.
c. How the group's work is to be presented is clearly defined.
d. Shared responsibility for presentation given to all members of any group.

7. Role Play:

Purpose: To allow participants to practice learned behavior in new situations, act out real-life situations, and experience new perspectives.

Description: Roles may be set up by the trainer or participants may make up their own roles. Participants can thus explore solutions to situations or problems under discussion. Since this is a role play, discussion can center around the role and characterization presented by the participant and thus avoid criticism of the participants themselves. Role plays can be used in the large group or in smaller groups if appropriate.

Process:

a. Description of role play given orally or as a handout (developed by trainer or participants).
b. Participants of role play are given a time limit to prepare.
c. Participants act out role play as the character that they are portraying.

d. Trainer facilitates discussion/analysis of behavior portrayed or felt by participants.
e. Participants offer suggestions for changing their own behavior/ attitudes.

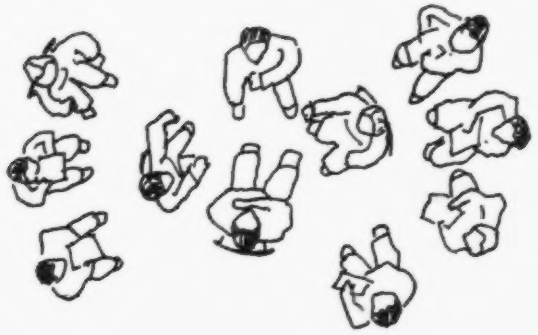
8. **Fishbowl:**

Purpose: To provide participants with an active observation and analysis exercise that allows them to witness and critique a staged situation.

Description: One small group is situated in the center of a larger group so that the outer group can observe and analyze the interactions of the inner group. Participants may observe a role play or an actual situation such as a discussion or a planning meeting. This allows one group of participants to evaluate a given situation from the outside by seeing it enacted in a precise manner by another group of participants. It differs from a role play, which focuses on the feelings and reactions of the role-playing participants, in that the focus is on the observation and feedback that is done by the outer group to the information supplied by the inner group. Situations might include teacher/student behavior in the classroom, interaction between administrators and teachers, decision making or problem solving. Again, the purpose is to practice observation of a group activity and have the opportunity to give and receive feedback on that process. (For more information on giving and receiving feedback see the section on **Collaboration Skills**).

Process:

a. Trainer divides participants into inner and outer group.
b. Inner group openly discusses or acts out situation (developed by trainer or participants).
c. Persons in the inner group are active while the outer group listens and observes behavior. Specific observation roles may be assigned to outer group members.
d. Outer group gives feedback to inner group about what they saw.
e. Trainer facilitates analysis of behavior witnessed in inner group.



9. Field Trips:

Purpose: To allow participants to experience, firsthand, the topic of study. Field trips generally bring to life ideas that have been discussed and analyzed in class.

Description: Field trips should be well-planned and help stimulate the interest of the participants. The trainer must be aware of financial and time factors and coordinate field trips accordingly. Teaching methods, classroom design, or implementation of instructional materials, for example, can all be witnessed firsthand by visiting schools and other educational facilities.

Process:

a. Participants are briefed on field trip - location, time and purpose of trip. Objectives for the trip are outlined.
b. Trainer may help formulate a list of questions, observations, or considerations that the participants may wish to investigate.
c. Field trips is conducted - this may include escorts by community leaders and/or explanations by location specialists.
d. After field trip, participants are debriefed. The field trip is discussed and critiqued. Objectives are discussed and a question and answer period allows for participant interaction and sharing of ideas.

10. Interviews:

Purpose: To actively involve participants in soliciting information about a particular topic and/or from a particular source.

Description: Interviewing can be done within the training group or used as a method to involve the group in the community where training is taking place, their own school system, or the Ministry of Education. Questions can be designed by the participants to address issues and concerns they may have and would be valuable to the entire group. Participants are able to witness a variety of strategies used by their colleagues to gather and analyze information.

Process:

a. Participants divide into groups.
b. The time period for the exercise is established - either during training time or during an established time outside of training.
c. Participants design their own strategies for asking questions and gathering information.
d. A presentation strategy is discussed and decided upon for presentation of information to the entire group.
e. Information is collected.
f. The information is analyzed and organized and presentations are given.

11. Panels:

Purpose: To use outside 'experts' to present or demonstrate new materials or ideas.

Description: Panel discussions often involve a facilitated debate and presentation on a given topic, followed by a question and answer period. Variations on this pattern that allow more open interaction between panel members and participants are possible and should be experimented with. Panels of experts can enhance the learning experience of the participants and give them access to active members of the community. It can help participants to establish an information support network outside of the training program.

Process:

a. Objectives of having guest speakers are set.
b. Panel members are selected by trainer and/or participants.
c. Panel is invited to training session (guidelines and information is provided to panel members).
d. Participants are encouraged to ask questions or join in discussion.
e. Analysis and evaluation of panel presentation by participants is facilitated by trainer.

12. Case Studies:

Purpose: To allow participants to analyze and discuss a real or hypothetical situation they might encounter.

Description: By reading a detailed case study participants are able to identify alternative behaviors and solutions to situations and problems they might experience in the classroom. Case studies should be provided by the trainer and be appropriate and applicable for teachers. Topics such as classroom management make ideal subjects for case study analysis. The trainer should design the case study activity so that it is presented with interim reflection periods and discussed in small logical components.

Process:

a. Trainer writes or obtains appropriate case study focusing on the topic which is to be addressed.
b. Participants either break up into groups or work together in a seminar type discussion.
c. Analysis and solutions to problems in case study presented by participants.
d. Trainer facilitates questioning and approaches to alternative solutions.

13. **Critical Incidents:**

Purpose: Same as **Case Studies** above.

Description: Similar to the **Case Studies**, the critical incident is a short paragraph describing a situation that requires an immediate response. Participants are encouraged to respond to the incident, take a stance they would defend, and discuss the range of options with other participants.

Process: Same as **Case Studies** above.

14. **Micro-teaching:**

Purpose: To allow participants to practice classroom behavior, receive feedback and modify their behavior or perfect their techniques while still in training.

Description: Teachers can practice a particular skill (e.g. introducing lessons, using a particular game, activity, or structured experience), a new behavior (e.g. using open questioning, facilitating a discussion - as opposed to leading a discussion, assisting students in generating objectives, or integrating curriculum), or improvement on his/her teaching style in a simulated classroom. The advantage in micro-teaching is that participants have the opportunity to receive feedback and then restructure their delivery and reteach. For many teachers, this will be the first time that they have an opportunity for peer-evaluation. For this reason, micro-teaching can be a very effective and useful training technique. (See **Collaboration Skills** for a detailed discussion of feedback/critiquing and **Supervision** for more information on observation techniques and the clinical supervision model).

Process:

a. The trainer prepares the training environment to serve as a simulated classroom (identifying real students or preparing fellow participants to play the role of particular types of students, adjusting the training sight to approximate a local classroom, etc.)
b. Participants are asked to present an outline or lesson plan for the micro-teaching session.
c. A time limit is given for the length of the actual presentation.
d. An actual lesson is taught or skill or behavior practiced by each participant while a few individuals or the rest of the group evaluates the performance.
e. The trainer can specify particular behaviors to be evaluated or they can be requested beforehand by the participant.
f. Feedback is then given and each participant by his/her peers and the trainer. Peer evaluation can be oral and/or written.
g. When available and appropriate, videotape or cassette recorders can be used to allow participants to actually witness their own performance.

Personal evaluation and feedback can then precede peer and trainer feedback. Participants allowed to view or hear their own presentation may be better able to identify weak points and/or accept constructive criticism from others.

h. Upon receiving evaluations, participants restructure their presentations and do a second micro-teaching presentation with altered behavior to improve performance.
i. Re-evaluation is carried out as described in steps f and g.
j. Participant gives a presentation on what they have learned and how it will help them. Feedback by all is encouraged.

15. **Peer Training:**

Purpose: To allow participants with expertise in a certain field to help in the training process and add to both content areas covered and styles being modeled.

Description: Peer training can help participants to network for future cooperation, collaboration and support in teaching. It takes the role of trainer away from the trainer and gives the authority and control of learning back to the participants. Though rewarding, the preparation for peer training activities can be extensive and involved and the trainer should be ready to commit a great deal of time to this activity.

Process:

a. Trainer solicits participant assistance in training in a particular field of study, asks for areas of expertise from participants, or assigns participants topics to be researched, prepared and presented.
b. Participants who wish to (or are assigned to) help with the training work with the trainer to establish a session training design.
c. Other participants are encouraged to ask questions and participate in discussions about the topic area to be presented.

Listed here are some of the techniques you may find useful when training teachers. As stated above, these are only suggestions and can be tailored to fit your own particular situation and training style. Sometimes it is very useful to ask other teacher trainers about some of their techniques to explore other alternatives expand your repertoire of training skills. The primary challenge for the teacher trainer is to design and implement a training program that is coherent, comprehensive and, above all, appropriate to the cultural context of the host country.

As discussed in training design, it is important that you constantly assess your effectiveness as a trainer through feedback from participants and other trainers. No technique will benefit participants if it is poorly administered or inappropriate for the group you are training. Continually check to ensure that participants are learning what they need to know. Time allocated for training programs is invariably shorter than what is needed, so wasted training time is often lost forever.

Other skills needed by a trainer include observation and supervision skills. These skills are discussed in the following section of the manual and will assist in preparing you to be a teacher trainer.

ACTIVITY BOX

1. Design a three hour training session using at least three techniques you have learned. Choose a specific teacher training topic on which to base your session.
2. Identify a game or activity commonly played by teachers in the host country. Adapt or redesign the game to be used as a tool in your teacher training program.

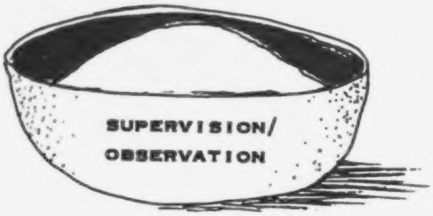
References:

McCarthy, B. The 4Mat System - Teaching to Learning Styles with Right/Left Mode Techniques. Barrington, IL: Excel, 1980.

Maguire, Pat. Training of Trainers Workshop. Lome, Togo: US Peace Corps, Regional Training Resources Office, 1980.

Training Techniques. Amherst, MA: Institute for Training and Development, 1986.

SUPERVISION



One of the skills a teacher trainer needs is the ability to supervise teachers effectively. This includes working closely with the teacher to determine areas for improvement, the ability to observe accurately and effectively, and the ability to provide constructive support to teachers as they try to use their new-found skills. The method of clinical supervision and the techniques outlined here can be adapted according to the needs of the supervisors and the cultural constraints of the host country. Time constraints may prevent every phase of the model from being followed exactly.

Clinical Supervision

Clinical supervision is a method of supervision where the supervisor is involved with the teacher in a close, "helping" relationship. Ideas are shared and help is given in order to improve the teacher's ability through the analysis of objective data that is collected during the observation. Various techniques used to collect this data will be discussed in the next part of this section.

The most notable difference between the clinical supervision model and other more traditional models of teacher supervision is that the supervisor and the teacher discuss and agree upon the focus for the observation. For example, if the focus of the observation is to be teacher-student interaction and the supervisor notes that "out of a class of 45 students, only six were called on by the teacher to respond to questions", the supervisor and teacher have specific and mutually desired data to discuss. This then forms the basis for a cooperative relationship in which the supervisor helps the teacher to develop strategies for improving his/her performance in future lessons. In addition, the clinical supervision model reduces much of the anxiety usually associated with classroom observation by a supervisor. If the objectives are clearly stated before the observation and the method of data collection is discussed during this pre-observation period, there are no secrets about what the supervisor is doing while the teacher is teaching.

The clinical supervision model is based on several assumptions:

- Teaching is not random but is characterized by regularity in style and approach.

- The pedagogical skills used by the teacher can be classified and studied.

- If the teacher is conscious of his/her behavior, the learning environment is greatly improved as is the teacher's overall instructional ability.

- Through careful and systematic observation, analysis and dialogue with a supervisor, effective teaching can be reinforced.

The Clinical Supervision Model is based on the participation of two people - the teacher and the supervisor. It consists of four phases which can be modified according to the needs of the teacher and the supervisor. The stages, which are described briefly below, are:

1. Pre-observation conference
2. Classroom observation
3. Analysis and strategy session
4. Post-observation conference

When used properly this model not only creates a feeling of trust and common purpose between supervisor and teacher, but builds skills in teachers which, in turn, allows them to monitor their own classroom behaviors and that of fellow teachers.

It is important to note that this model of supervision is quite different from what is usually considered to be "supervision" by teachers and supervisors. The model is sufficiently different that it may not be easily, if ever, accepted in your school or institution. Furthermore, some components may not fit the cultural setting in which you find yourself. You may experience some resistance to this model initially. Often, however, as teachers become more familiar with the rationale behind the model and see results from the use of clinical supervision, their resistance decreases. The supervisor should be sensitive to the traditional way supervision is handled at the school and plan carefully when introducing the model. The model suggested here should never be employed unless both the teacher and the supervisor understand its use and agree that the data collected from the observation will help the teacher become more effective in the classroom. In extreme cases, the supervisor may want to move slowly from a more traditional supervision model which utilizes feedback and critiquing (see Chapter 3, **Collaboration Skills**) into the many staged, teacher-centered clinical supervision model.

1. Pre-observation Conference

Goals:

a) To establish real two-way communication.
b) To discuss and agree on an objective of supervision cycle.
c) To discuss and agree on what is expected of the supervisor and the teacher during the supervision.

Real two-way communication means that each person involved in the interaction has a sincere desire to listen to and understand the other. A genuine feeling of trust must exist between the supervisor and the teacher to make the supervision cycle productive. It is important for the supervisor and the teacher to realize that a single observation will not improve every aspect of the teacher's class. The supervisor should limit the focus of her/his observation to one objective and not focus on every aspect of the class. The objective of the supervision should be determined by the teacher in dialogue with the supervisor. The supervisor's role is to help the teacher clarify the objectives that would improve the learning environment. By creating a feeling of trust, listening and asking the right questions, the supervisor can help make the objectives useful to the teacher. If the teacher can formulate the objectives of the supervision, feedback is much more useful for the teacher and will probably be more readily incorporated in her/his teaching style.

The method of collecting useful data is also discussed and determined during this conference. For a discussion of specific aspects of the class that can be observed and techniques for collecting useful data see the next part of this section: **Observation.**

2. Classroom Observation

The supervisor observes the lesson and collects the agreed upon data. The supervisor should try to avoid value judgments. Again, it is very difficult to work on all aspects of teaching at once, so if the supervisor can focus on the limited objectives agreed upon and collect data that the teacher feels are useful, chances for improving the teacher's teaching are greatly enhanced.

It must be mentioned here that the supervisor should never interrupt a lesson to correct a teacher. There is a tendency, when observing a teacher who is conveying incorrect material to offer the correct information to the students. This action only serves to discredit the teacher and destroy any bond of trust that has been established during the pre-conference phase. Instead, the supervisor should note the incorrect information and bring it to the attention of the teacher only during the post-observation conference.

3. Analysis and Strategy Session

This may be just a brief period after the observation when the supervisor reflects on the class and decides how to approach the next phase with the teacher. If the supervisor is prepared and has had time to organize the data (even if just briefly) the next phase will go much more smoothly. The supervisor should use this time to think about how best the data can be used by the teacher.

4. Post-observation Session

This is the time when the teacher and the supervisor meet alone to discuss the observation and the analysis of data relative to the teacher's objectives. If the data is collected and presented in a clear fashion, the teacher will be more likely to use the data and evaluate his/her teaching and classroom performance. It is important to try to elicit the feedback directly from what the teacher sees from the data. This is accomplished only after a feeling of trust and communication has been established. The supervisor should:

a) Ask the teacher to analyze the data and tell the supervisor about the lesson. (Rather than having the teacher sit passively by while the supervisor tells the teacher about the lesson).

b) Ask questions to focus the teacher on certain aspects of the lesson. (Since it may not always be possible for a teacher to successfully evaluate his/her own teaching, there may be occasions where the supervisor needs to be more directive - see **Collaboration Skills** for a detailed discussion of giving and receiving feedback and critiquing. In general, every effort should be taken to elicit the analysis of the data from the teacher).

c) Discuss ways to improve the lesson and whether the focus of the next observation is going to remain on the already agreed upon objective. (This part of the meeting can serve as a part of the next pre-observation conference).

d) Request feedback from the teacher as to how effective the supervision cycle has been and how to improve the next supervision cycle.

Team approaches using these same basic steps have been used quite successfully. If a team approach is tried, it is recommended that one team member act as the team leader (supervisor) who initiates and maintains contact with the teacher being supervised. The team approach is particularly useful in the strategy session to paint a more complete picture of the observation data and strategies for improvement. If appropriate, the team members can also observe the class and collect the data but care must be taken not to overwhelm the teacher or upset the learning environment of the class by having too many supervisors/ observers in the room.

Observation

As mentioned in the previous section, one of the objectives of the pre-observation conference is to focus the supervisory observation on observable behavior. The teacher may have few ideas on what can be observed in the classroom to gain useful insights into her/his teaching practices.

Examples of observable behavior are listed below. This is in no way a complete list and discussion of observable behavior that would add to this list presented would be a valuable component to an in-service teacher workshop.

- Type of reinforcement used by the teacher. (positive/negative, verbal/nonverbal).
- Teacher movement in the class.
- Teacher's ability to redirect questions when wrong answer is given.
- Amount of teacher talk and student talk.
- Type of questions used by the teacher.
- Clear introduction of the lesson with review of previous lesson.
- Summary of the lesson.
- Student learning styles/Teachers ability to address different learning styles.

Observation Techniques

Listed below are several basic approaches to and techniques for the collection of data. Where indicated, sample observation forms have been included in the **Appendix** of this Manual so that supervisors can use a standardized form for their observation.

1. The Anthropological Approach: In this approach, the observer examines various "artifacts" or situations at the school or in the classroom and discusses inferences to be drawn with the teacher.

Example:

OBSERVATION: Students are not doing homework that is assigned.

Inference: Students have no time because of chores at home.

Inference: Students can not do the homework due to difficulty with concept or poor explanation.

Inference: Teacher does not reward students when they do homework.

Inference: Teacher has not clearly developed a policy when students do not do homework.

Inference: Homework is not relevant to skills covered in class.

After a brainstorming session between the teacher and supervisor, the observation is discussed. During the course of the classroom visit several observations, similar to the one mentioned above, are made and discussed. This is an excellent way to decide objectives for future observations.

2. Behavior Frequency Approach: The observer counts the number of times a specific behavior is displayed and records it in a predetermined category. This can be a behavior of the teacher or students. Some examples:

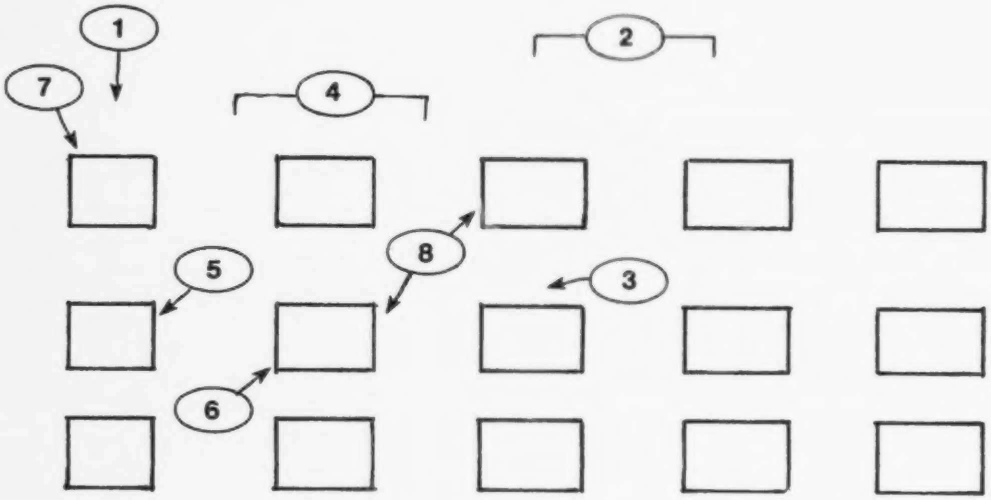
   - Count the number of questions asked by the teacher and classify them according to type of question.
   - Count the positive and negative comments made by the teacher
   - Count and classify the type of responses made by students.
   - Identify which students answer questions and participate in discussions and to what extent.
   - Note how long a teacher waits for an answer and if this varies between with high-achieving students and low-achieving students.

3. Time sampling: Probably one of the best known time sampling methods is the Flander's Interaction Analysis in which the observer periodically (every 5 seconds) lists what type of interaction is taking place (a copy of this form has been included in the **Appendix**). After the agreed upon period is complete, the observer counts up the type of interactions and calculates a percentage. Although the techniques have been used with great success, the observer must understand and memorize classification codes for each of the types of interaction in order to use the chart efficiently.

4. Verbatim Recording: This method involves a considerable amount of writing on the part of the observer who records every word spoken by both teacher and students during the observation. Unless the supervisor knows shorthand or speedwriting, this technique can be very

time consuming and not very worthwhile when discussing the lesson. This method might be used periodically during the observation of language classes where, occasionally, it is the verbatim episode that is of most interest to both teacher and supervisor.

5. Classroom Mapping: This approach is useful for observing teacher movements in the classroom. Before the observation period, the observer draws a map of the classroom - including where she/he would sit. During the observation period (every three minutes or so) the observer places a circle on the map to coincide with the teacher's position in the classroom. The circles are numbered sequentially and an arrow(s) drawn from each circle pointing to the group or groups of students where the teacher's attention was directed while the teacher was in that particular position.



This technique can also be used to map which students are participating in the class. A very simple way to map class participation is to, having created a blank map, mark each box representing a student who participates in the class. If desired, a more detailed number code could be used to represent the type of participation. For example:

1: Student reads out loud.
2: Student asks question.
3: Student answers question.(called on by teacher)
4: Student answers question.(voluntarily answers)
5: Student makes statement relating to lesson.
6: Student does not know answer to question when asked.

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6. Interview Approach: This approach involves the collection of potentially valuable feedback for the teacher by having the observer interview all those people who know or interact with that teacher professionally. The supervisor can directly ask students, other teachers, the principal or the teacher about specific lessons, interaction and teaching skills, etc.

Data Collection

If the supervisor has access to a videotape recorder or an ordinary tape recorder, objective information can be collected by making a videotape or audiotape of the class. This technique for collecting data has the advantage of allowing the teacher to view, objectively, his/her own performance. It should be stressed, however, that the supervisor should not feel tied to this technology. Many methods exist for collecting valuable and objective information for discussion and improvement. It is up to the supervisor to choose the appropriate means of collecting the desired data.

In choosing the observation technique to be used, the supervisor or observer and teacher should keep the following questions in mind:

1. Will the data collected provide the teacher with helpful information?
2. Are both the technique and data type chosen compatible with the objective of the observation discussed in the pre-observation conference?
3. Can the system be used comfortably by the observer?

The ultimate goal of any supervision program should be to have teachers become self-supervised. For this to occur teachers must be provided with as much concrete, specific, and non-evaluative data as possible so that they are in a position to evaluate their own performance in relation to the predetermined objectives. Teachers are then in a position to determine where changes might take place. All of this must be done with the help of the supervisor, not by the supervisor.

ACTIVITY BOX

1. Think of a time when you have been observed and given feedback. How did you feel? How were you approached? What did you like/dislike about the way the observation was conducted? Re-examine this experience with respect to the Clinical Supervision Model and consider what your experience would have been like under this model.

2. Consider how you would introduce the concept of clinical supervision to a group that is:

    a. Resistant to it (making a slow or partial transition to it).
    b. Unsure of it (making a slow or partial transition to it).
    c. Interested in it (introducing the complete, perhaps adapted model).

3. Think of ways in which data can be collected to identify each of the observable behaviors listed at the beginning of the **Observation** subsection.

References:

Anglin, Leo W., Jr., Richard M. Goldman and Joyce S. Anglin. Teaching: What It's All About. New York: Harper and Row, 1982.

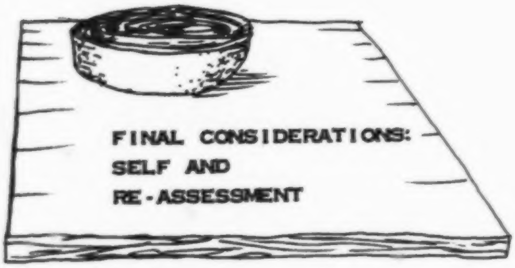
Goldhammer, R. Clinical Supervision. New York: Holt, Rinehart and Winston, 1969.

Wiles, Kimball and John T. Lovell. Supervision for Better Schools. Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1975.

FINAL CONSIDERATIONS FOR THE TRAINER

FINAL CONSIDERATIONS FOR THE TRAINER

Assessing Personal Training Constraints



Now that you are familiar with each of the skill areas presented in this chapter, it is time for you to step back and look at how you can fulfill your role as a teacher trainer. Your ability to understand the relationship between these areas and develop and use the skills associated with each will determine your level of success as a teacher trainer. Each time you design a training program or conduct a needs assessment, you will have to reconsider the information presented in this chapter, reevaluate what you know and need to know, and work on gathering the skills and information you need to carry out a successful training program.

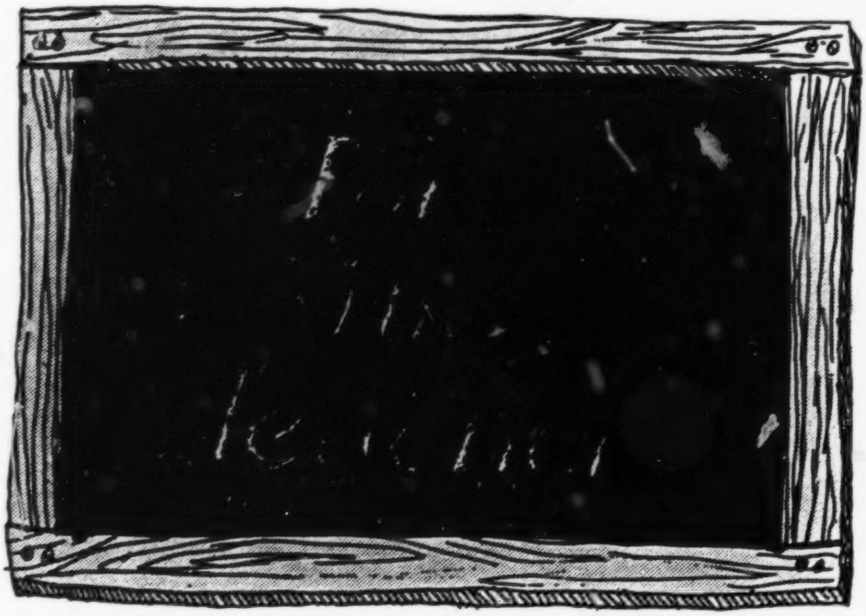
Reassessing Teacher Needs

As your training program commences, you have will have a better opportunity to collect first-hand information about your participants as individuals, and take a more in-depth look at their training needs. With everyone present at the training site you will be better able to explore the subtleties of each individual personality and the perceptions that will influence how they react in both the training and classroom environments. As a starting point, try to determine the answers to these questions:

- What are their perceptions of what makes a good teacher in their society?
- When and why did they decide to go into teaching?
- What do they see as the advantages and disadvantages of teaching as a career?
- How do they feel about:
  - a teacher's status in the community?
  - their pay?
  - their workload?

You may not be able to change their situations, but attitudes and motivations are an important feature of teacher performance. If you are to help teachers develop and sustain positive and constructive attitudes, you must know what their attitudes are and what has influenced them.

The next chapter of this manual is meant to be a resource to you, as a teacher trainer. It will provide an overview of topics critical to the performance of any teacher. You should re-familiarize yourself with these topics, adapt them to your host country context, and use them in the training programs you design for teachers.



CHAPTER 2

WHAT A TEACHER NEEDS TO KNOW

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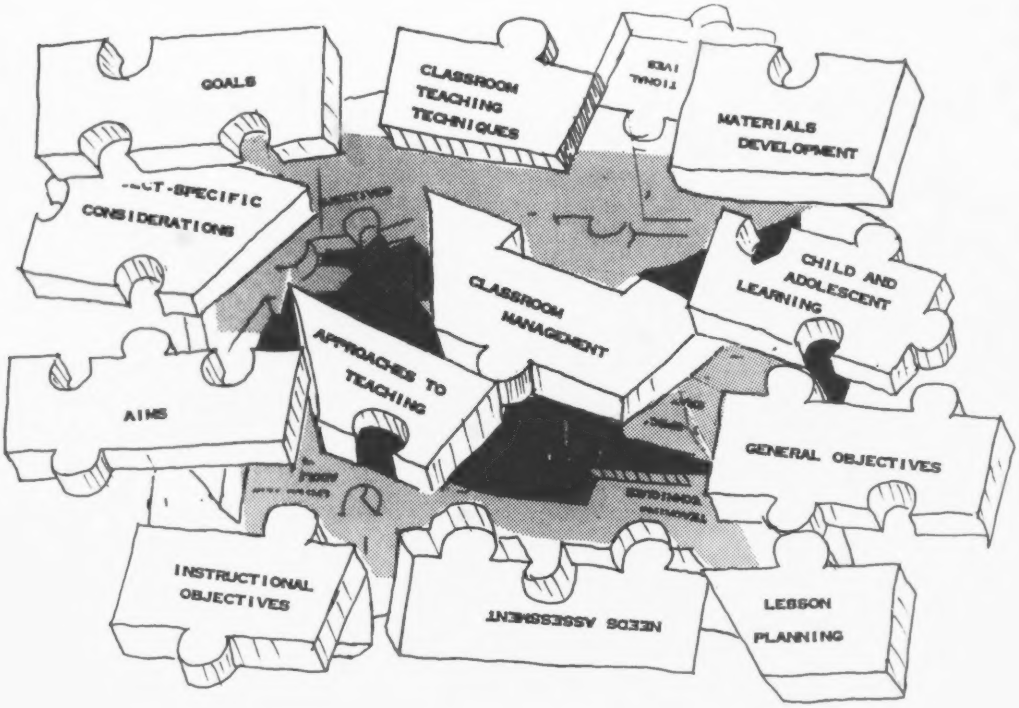
UNDERSTANDING THE EDUCATIONAL PROCESS

In order to understand the day-to-day routines of teaching, it is often necessary to understand the overall context in which they occur. Whereas Chapter 1 focussed on teacher training, this chapter examines classroom teaching. It addresses the question: What are the many things a teacher needs to know to be more effective?



The goal of this chapter will be to piece together this puzzle so that the teacher understands not only the information presented in each of the sections, but the way each section is related and interrelated to other parts of the educational process as well.

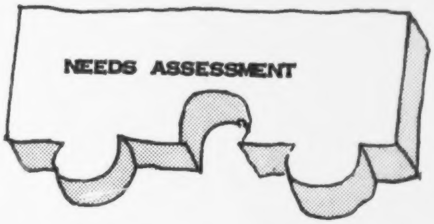
Although each section can be read in isolation to answer specific questions, it is best to read and understand this chapter in its entirety. Designing learning activities in isolation from objectives or materials is like a doctor caring for the heart in isolation from the liver or brain. It may appear to work on the surface but, deep down, something is bound to go wrong.

Classroom teaching is one of the most challenging and important professions there is. This chapter is meant to help teachers make their jobs both easier and more rewarding by making them part of an active and effective educational system.

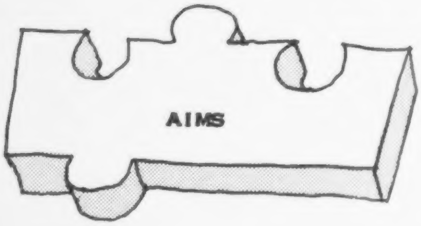
NEEDS ASSESSMENT, AIMS, GOALS AND GENERAL OBJECTIVES

NEEDS ASSESSMENT, AIMS, GOALS AND GENERAL OBJECTIVES

The first step in the design of any educational program is the **needs assessment**. The basic ideas presented in Chapter 1, **Needs Assessment**, are directly transferable, with appropriate adaptation of key questions to the teaching situation. Curriculum that is taught in the classroom is seldom created out of thin air. The curriculum developers, be they ministry personnel or teachers, should consider the needs of the student, the culture and society, and the knowledge base from which the subject is being taught.

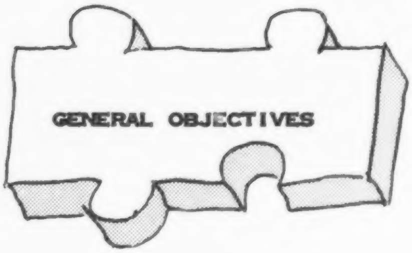


An **aim** is defined as a general statement of intent which attempts to give direction to a curriculum effort designed to bring about some change. Statement of an aim is often based on a prior needs assessment. A curriculum aim is the foundation of any curriculum design. It defines the intentions of a curriculum in a single statement and, for this reason, it is stated in broad, general terms.

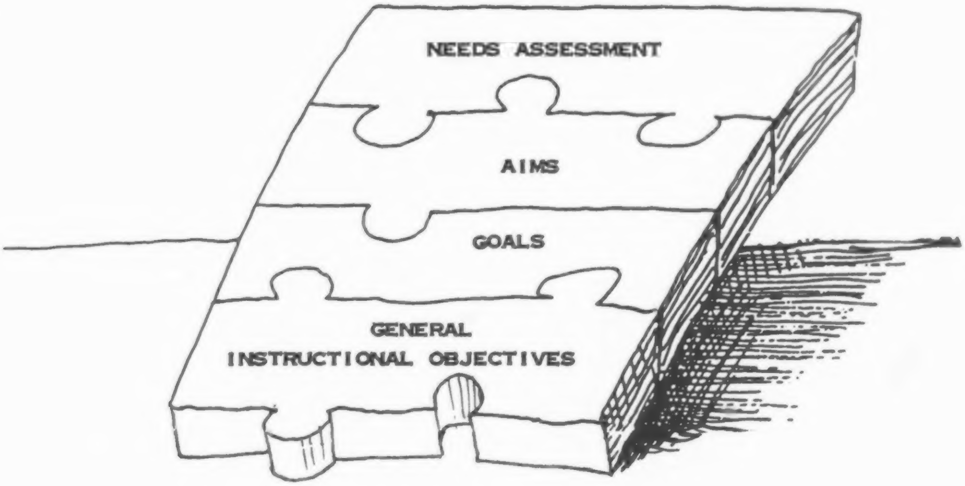


Educational **goals** are selected or screened from the stated aims. A goal, more specific than an aim, is a broad objective statement that describes desired outcomes of education which are meant to reflect both student and societal needs. In formulating goals, the curriculum planner considers the values, attitudes and needs of the society and balances this with the students' abilities, interests, needs and the subject knowledge base to determine useful and achievable goals.

From goals come **general instructional objectives.** These objectives are stated in terms of the students behavior and constructed with consideration to lesson planning, instructional materials and classroom implementation. General instructional objectives are not the end of the process, merely the beginning. This is the framework that a teacher may be given in a curriculum guide or from the Ministry of Education. It is the teacher's responsibility to screen and rewrite these objectives to fit the specific needs of his/her instructional situation.

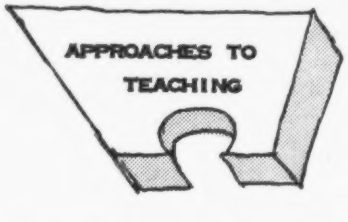


The first pieces of the educational process puzzle are now ready to be put together. As this chapter develops, the puzzle will be constructed piece by piece to produce, by the end of the chapter, a complete picture of the educational process.



The next three pieces of the puzzle will take the teacher from the general objectives (often supplied by the Ministry of Education) to the specific objectives they need for teaching. Understanding these sections (**Approaches to Teaching, Child and Adolescent Learning**, and **Subject-Specific Considerations**) will help the teacher select and modify general objectives and develop the specific objectives they need to meet the day-to-day instructional needs of their students.

APPROACHES TO TEACHING



Most teachers are expected to engage in several professional roles simultaneously. They are counselors, facilitators, instructional managers, curriculum designers, academic instructors and evaluators of instruction. Teachers are responsible for the personal growth and social development of their students as well as their mastery of academic subjects. To fill these roles most teachers find they need to draw on a variety of strategies. A key element in becoming a competent teacher is mastering the ability to choose, from a repertoire of approaches, the one best suited to the needs of the students, the content area and to the classroom environment itself.

Sources of Teaching Approaches

Since teaching employs such a wide range of skills, it draws from many theoretical disciplines, both from within the field of education itself and from other disciplines such as: experimental psychology, counseling psychology, sociology, systems analysis, law and management. From such sources, educators have developed a number of approaches to teaching. Each approach consists of a theoretical position, a rationale, a set of guidelines for designing educational activities, and a description of what it is good for and why. Each approach has a characteristic philosophical orientation and associated application in the classroom. Some are narrow in focus, while others are useful for a wide variety of purposes. While many approaches focus on the teaching of information, others are primarily directed toward helping students improve their self-concept or clarification of social values.

The chart on the next page illustrates a few of the approaches to teaching which have been described in Models of Teaching by Marsha Weil and Bruce Joyce. This list is by no means exhaustive; many other approaches may be found in the identified text and in other teaching manuals (although titles such as 'models of teaching' or 'instructional strategies' may take the place of approaches to teaching). The examples that have been selected for inclusion in the chart are considered illustrative of the range of choices available to teachers. Should you wish to explore some of the approaches not included in this section, they include:

- A developmental approach based on the work of Jean Piaget,
- A group investigation approach based on democratic teaching of Herbert Thelen,
- An approach aimed at improving inductive thinking developed by Hilda Taba, and
- Gestalt, "sensitivity" training originated by humanistic therapists and psychologists.

Approach	Theorist	Assumptions
Operant Conditioning	B.F. Skinner	Based on belief that human behavior is shaped by external forces. Teachers condition student behavior by providing positive and negative reinforcement to students.
Advance Organizer	David Ausubel	Information should first be presented as an overview of a topic in the form of a chart, outline or description which provides a 'whole picture' (an advance organizer). Each sub-topic can then be isolated and studied in more detail.
Concept Attainment	Jerome Bruner	Knowledge can be organized around key concepts. Teachers help students develop their ability to learn and think about concepts by identifying attributes and examples.
Inquiry Training	Richard Suchman	Students develop ability to build theories by using the scientific method. Teachers provide students with puzzling events to resolve. They help students understand all knowledge is tentative.
Legalistic	D. Oliver J. Shaver	Students must learn to participate in a democratic society. Teachers use Socratic or confrontational method to encourage students to identify public policy issues and defend their positions.
Social Simulation	Sarene Boocock	Simulation of realistic life events in a controlled environment provides students with the opportunity to experience social processes and their own reactions to them.
Synectics	William Gordon	Creativity can be taught through group activities which use metaphor, analogy deferred judgement and emotional responses to solve problems or create ideas.
Nondirective	Carl Rogers	In an environment where students are trusted, prized and encouraged to express their feelings, students can define their own learning needs and identify the most meaningful strategies for reaching them. Teacher uses interview techniques to guide students toward self-realization.

Sample Applications	Considerations
Programmed instruction packages used in language laboratories: Each time students complete a sentence correctly they move on; incorrect answers require repetition until correct answers are given.	° Communicates information ° Teacher-centered ° Any age, subject ° Reliance on programmed planning
A biology teacher gives students a chart of the taxonomy of the plant family and its sub-groups. She then lectures moving from basic to more complex aspects of each group.	° Communicates information ° Teacher-centered ° Any age, subject ° Reliance on lecture
A math teacher introduces the concepts of line and plane. Students answer yes and no questions until they can identify the essential attributes of each concept and explain its rules.	° Communicates information ° Somewhat Teacher-centered ° Any age, subject ° Reliance on questioning, explanation
A science teacher presents students with a puzzle: when two liquids are combined their total volume decreases. Students gather data, form an hypothesis, try to prove or disprove it and formulate a theory about the liquids.	° Teaches process of acquiring information ° Somewhat teacher-centered ° Any age, especially used for natural and social science
A social studies teacher presents a case: Which language should be the national language? Students group themselves into those in favor and those opposed, debate the issues and identify conflicting values.	° Communicates social values ° Teacher-centered ° Adolescents/adults, social studies, civics
In the "Life Career" game students assume the role of fictitious persons, make career and family decisions and experience the consequences at various intervals.	° Teaches information/values ° Somewhat teacher-centered ° Adolescents/adults, topics involving interaction
Students are asked to invent a new tool for planting. They brainstorm a list of objects like the tool, imagine themselves "becoming" the tool, combine opposite attributes to describe the tool and suggest new designs.	° Enhances personal growth ° Somewhat student-centered ° Any age,any subject for problem-solving, new ideas, creative writing
A teacher concerned by student's lack of interest negotiates "work contracts" with her students. She meets with each student to discuss their learning plans, renegotiates and assists students in a self-evaluation following the day's work.	° For personal growth ° Student-centered ° Adolescents/adults, student responsibility for subject

Choosing an Approach

Research has shown that no single approach to teaching is better than another; effective teachers are those who are skillful and flexible in adapting, combining and using a variety of approaches to fit their situation. In the field, teachers may be limited in their choice of an approach by the philosophy and objectives of their school system. A school system which stresses end-of-the-year qualifying examinations may allow less classroom time for teaching approaches directed more toward personal growth or social values. Students who have never experienced student-centered models may feel uncomfortable with less directive approaches, and the teacher may need to implement such approaches gradually. Some approaches, such as Social Simulation, require extensive planning and materials which may not be possible to obtain. Teachers are encouraged, however, to draw on whatever training materials are available and to learn about and practice a variety of approaches. In general, it is a good idea to learn two or three methods well and become confident in using them before moving on to learn others. Three key ways to become familiar with an approach include:

1. Reading works by the theorists.
2. Watching demonstrations.
3. Practicing peer teaching.

While teachers may have limited access to written resources, they may be able to draw upon previous training in other fields to act as resources for one another. Those with background in counseling may be able to teach others about how to apply the theories of Carl Rogers, Fritz Perls or Abraham Maslow to the classroom. Those trained in science can familiarize others with the scientific method of inquiry, while those with legal training can demonstrate how to use case studies and debate patterned along the lines of the legalistic approach. Whenever possible, teachers should read works of the theorists and descriptions of how they have been applied to teaching (some suggested readings are included in the references for this section.)

Teachers may want to try different ways to teach the same lesson, in order to determine which one is most effective for them. Since many studies indicate that students learn better when they have a clear understanding of the purpose and direction of the lesson, teachers should consider explaining the new method to the students during the introductory phase of their class.

Recent Research in Teacher Effectiveness

Teachers who consult a bibliography of major American theorists associated with approaches to teaching will find that most grew out of social science research conducted in the 50's and 60's. While the theories themselves were based on scientific research, many of the applications for classroom use were based more on teachers' intuition and on common sense than on actual research in the school itself. During the 70's and 80's, much educational research has been devoted to the study of what it is that outstanding teachers actually do in the classrooms and how the approaches work in practice. Researchers caution that human learning, particularly in complex social settings, is affected by so many factors that simple blueprints will never apply to the many situations that teachers encounter. No one universal solution or approach can meet the needs of all situations. Nevertheless, new research on teacher effectiveness can help teachers to make more informed choices.

Many recent studies indicate that how teachers organize and manage the learning systems they use is key to the effectiveness of any approach. Effective teachers are seen to:

- present information more actively and clearly in the development stage of the lesson;
- be task-focused (e.g. most of the period was spent on mathematics, not socialization);
- allow students to initiate more content-related questions;
- be basically non-evaluative and create a relatively relaxed learning environment with comparatively little praise or criticism; and
- express higher achievement expectations (more homework, somewhat faster pace, more challenging).

It has been found that students seem to learn more when teachers are more actively involved, carryings the content to the students personally rather than depending on curriculum materials to do so. The information is conveyed mostly in brief presentations or demonstrations, followed by recitation or application opportunities. There is a great deal of teacher talk, but most of it is academic rather than procedural or managerial, and much of it involves asking questions and giving feedback rather than extended lecturing. This research points to the fact that, whatever approach a teacher chooses, its effectiveness depends of the teachers ability to set clear objectives, plan carefully and practice classroom management. (Teachers can consult other sections of this manual for information about how to accomplish these goals or for more specific information about teacher effectiveness, see Lee Shulman and Gary Sykes, Handbook of Teaching and Policy, 1983).

Adapting Teaching Approaches to the Cultural Setting

All the approaches to teaching outlined in this section come from a Western cultural context. Some, such as the Advance Organizer and Concept Attainment, are part of the colonial legacy left to many countries who experienced European-style education. Others, such as Operant Conditioning, are sufficiently consistent with older, more traditional approaches in that they have been easily accepted in the Third World. Certain approaches, however, may be quite incompatible with local beliefs about the role of the school and the teacher. In societies where free speech is limited, encouraging students to debate sensitive social issues could, in fact, have political and social consequences for them and for their families which an unsuspecting teacher might not foresee. In cultures where people behave more collectively and less individualistically, asking students to determine their "individual" learning needs outside the group (as in non-directive approaches) may not only be difficult to implement but, in fact, be outside the students' frame of reference. Inquiry training, while functional in settings where students are encouraged to inquire freely outside the classroom can create expectations of future work situations which are unrealistic in countries with few resources to devote to scientific inquiry. Religious taboos may be violated by some simulations. While it is the role of the teacher trainer to introduce teachers to new approaches, often it is best to undertake new plans gradually and to include host country colleagues in the planning process.

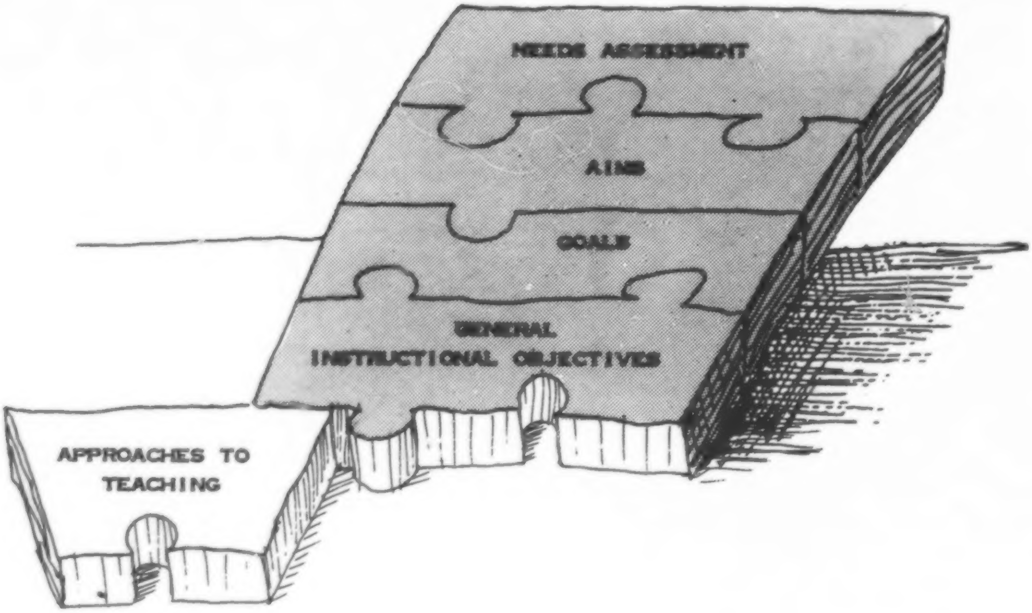
While some Western approaches may not be culturally appropriate, it may be that within the host country there exists information about traditional, nonformal teaching models could be adapted in the school. (The Tanzanians work-group model and the Sri Lankan Sarvodaya self-help movement are two examples.) By investigating and helping to implement teaching approaches that come out of the culture, teacher trainers can help host country teachers and students in their struggle for self-reliance and support of their unique cultural patterns.

ACTIVITY BOX

1. Think of a topic you particularly enjoy teaching. Now chose three approaches from the chart at the beginning of this section. Design three activities, one for each of the chosen approaches, to teach the topic selected.

2. Think of a teaching point that one of your classes has had a hard time understanding. Look at the chart and choose an approach which, if used, will make the lesson more easily understood by your students.

3. Refer to your answer in #2. List several reasons why you believe that this approach would make the lesson more easily understandable.



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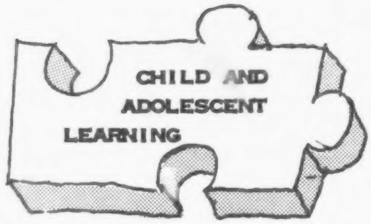
CHILD AND ADOLESCENT LEARNING

CHILD AND ADOLESCENT LEARNING



In order to create an effective learning environment, a teacher must understand how students learn. This section of the manual will discuss developmental theories and styles characteristic of child and adolescent learning. It identifies how these theories and styles relate to the classroom situation and what strategies a teacher can use to address them.

Child and adolescent learning theory includes the following primary considerations:

- Theoretical stages of cognitive, affective, and psychomotor development.
- Perceptual systems which include the five senses: sight, hearing, touch (and movement), taste and smell.
- Information processing and learning styles.
- Other considerations including environmental differences (cultural and social norms, the physical environment of the classroom) and grouping.

Developmental Theories

Developmental theories are associated with three domains of the learning process: cognitive, affective, and psychomotor. The cognitive domain encompasses the thought processes used in learning; the affective domain, emotional development and feeling; and the psychomotor domain, the physical employment of the body during the learning process.

The Cognitive Domain

Of the three, the cognitive domain has received a great deal of attention by educational psychologists (some of whom we shall explore in detail below). This is largely due to the fact that most educational systems stress the acquisition of knowledge over the social, emotional and physical development of the child. This does not mean that affective and psychomotor development should be ignored, merely that they have been given less attention in the literature than the cognitive aspects.

Piaget

Jean Piaget, a Swiss psychologist, provided much of the theoretical framework on which we currently base our understanding of child cognitive development. Based on his research, which focussed on mental growth and development, Piaget suggests general time periods (loosely associated with ages) in a child's life when different stages of development are most likely to occur. He presents these stages in two categories, the prelogical and logical. The prelogical stage consists of sensori-motor operations and pre-operational thought. The logical stage has the learner engaged in concrete operations and formal operations.

Prelogical Stage

SENSORI-MOTOR: From birth to approximately the age of two, the child is in a pre-verbal stage and bases his/her perceptions of the world on observations. Piaget divides this stage into six sub-stages which he associated with significant changes that occur at roughly four month intervals. Much of what the child understands is seen through imitation of parents and others who affect the child's life. The child develops at the sensori-motor stage by acting on the environment and establishing patterns for the effective acquisition of knowledge and a sense of the world.

During the prelogical stage, the child reaches a point of conceptual development that enables him/her to begin speaking and developing other cognitive and social skills.

One might observe a child in the sensori-motor stage:

- Making sounds.
- Reacting only to their immediate environment.
- Imitating parents' gestures, sounds, and movement.
- Acting in an ego-centric manner.

Example: The child does not understand that food is being prepared for him/her but cries because food is not immediately present.

PREOPERATIONAL THOUGHT: The preoperational stage (approximate ages: 2 -7) is defined as the time when the child is able to conceptualize and use representation in thought; as opposed to the hands-on orientation in the sensori-motor stage. This is especially evident in behavior such as:

- Spoken language: Use of words to represent objects; each object begins to take on its own definition.

- Deferred imitation: ability to imitate from memory something that is not present.

- Symbolic play: Use of an object to represent another object. (e.g., a piece of wood may no longer be just a piece of wood but can represent an animal, a playmate, a vehicle, etc.).

- Drawing: Ability to recreate, in a drawing or sketch, something they have experienced.

- Mental images: Ability to establish mental 'drawings' and store internalized images in their minds.

Another important aspect of the preoperational stage is the socialization of behavior. At this stage in the socialization process the child is moving from egocentric, nonsocial behavior to communicative, social behavior.

The teacher should be aware that prior to the age of seven or eight, a child may have difficulty with certain cognitive activities. These activities and corresponding difficulties include:

- Transformation: The ability to follow sequence or step by step procedures. Each piece of an operation is seen independently. Example: If a child sees a red cup being painted blue, he/she will identify it either as a 'red cup' before or a 'blue cup' after, but not a 'red cup that has been painted blue'.

- De-centration: The ability to focus on a broad range of perceptual information or aspects of an event. Example: If a tree falls, the child may concentrate on the fact that the tree is green rather than the fact that it has fallen. Or, if a child sees seven objects in a row of a certain length and five objects in a row of a longer length, he/she will choose the longer length as having the most objects.

- Reversibility: The ability to understand a 'reverse' act or procedure. Example: If a child sees two rows, equal in length, of seven objects and one row is then spread to form a row of longer length, the child will perceive the new longer row as having more objects even though he/she witnessed the row being lengthened.

- Conservation: The ability to conceptualize that objects and quantities may change in some ways but remain the same in others (i.e. conservation of numbers, area, and mass). Example: If an equal amount of water is put into two different sized containers, the child typically thinks that there is more water in the larger container.

Logical Stage

CONCRETE OPERATIONS: During the concrete operations stage (ages 7-11) the child's reasoning processes become logical and logical thought processes are applied to problems. This is a change from the strictly perceptual distinctions that were discussed in the pre-operations stage. The child begins to 'de-center' his/her thinking and broadens perceptions so that the problems of transformation, conservation, centration, and reversibility can be solved. If the child has a conflict between perception and reason, the child will now make judgments on reason.

Characteristics of a concrete thinker

- Classification: The ability to spontaneously group objects by one attribute and shift to another attribute and regroup the same objects.
- Class inclusion: The ability to understand and coordinate, in a hierarchial sense, part to whole relationships.
- Seriation: The ability to order.
- Conservation: Numbers remain the same even if operations (+, -) change (this can be applied to quantity, weight, volume, length).

Limitations of a concrete thinker

- Uses personal experience as the primary basis for understanding.
- Recognizes concepts but may not be able to explain them.
- Sees a limited number of options.
- Lacks a systematic 'plan of attack'.
- Hesitates to experiment.
- Lacks understanding of inferential information.
- Experiences difficulties in hypothesizing.

During the concrete operations stage, the child begins to move into more social behavior, becoming less egocentric and more accepting of others' points of view and differences.

Educational implications for this stage include: the child's ability to recognize time and speed, causality, classifying and ordering objects and ideas; and the teacher's ability to incorporate more complex ideas and relationships in lessons and allow the child to initiate problem solving. This is particularly true in math as the child begins to recognize variation with numbers, shapes, sizes, and concepts of addition, subtraction, etc.

Although Piaget does not directly address it as a stage, certain transitional signs are apparent in an individual moving from concrete to formal operations. The individual can be seen to:

- Use a 'plan of attack'.
- Recognize more complex relationships.
- Consider other options.
- Utilize inferential thinking.
- Begin asking 'why'; willing to experiment.
- Begin to generalize.
- Demonstrate a willingness to experiment.

FORMAL OPERATIONS: In the formal operations stage (approximate ages: 11 - 15 or older) the child/adolescent begins solving problems and using complex reasoning skills. This is the beginning of the adult thought processes and the individual is 'fine tuning' his/her ability to confront abstraction and analysis. This stage is occasionally beyond the reach of an individual depending on the environmental, physical, cognitive or emotional constraints he/she experiences. For example, psychologists have estimated that half the population of the U.S. may never reach this stage or develop formal operations completely, remaining at the concrete operations stage or in the transitional phase.

Characteristics of a formal thinker

- Probability: The ability to develop relationships between confirming and possible cases compatible with given elements.

- Correlations: The ability to conclude that there is or is not a causal relationship in an event and the ability to draw inferences from different variables.

- Combinations: The ability to generate possible combinations of ideas and/or solutions to problems.

- Proportional reasoning: The ability to discover equality of two ratios which form a proportion.

- Conservation: The ability to deduce and verify conservation from implied consequences.

In general, while the concrete thinker is unable to go beyond the given, consider cause and effect, hypothesize or analyze experience, the person who is operating in the formal operations stage is able to reflect about his/her thoughts and feelings and seek solutions to critical problems.

If the learner never moves into formal operations, he/she will never be able to master higher level skills associated with this level. These include:

- Hypothetical-deductive reasoning.
- Translation and interpretation in language.
- Grasp of scientific concepts (causation).
- Reflective abstraction (such as the understanding of metaphor, analogies, probability).

- Complex classification of ideas or objects.
- Problem solving

Piaget's theory has been much debated in both Third World and developed nations. The presentation of his findings here are meant to remind teachers and teacher trainers that there are stages of development through which children move. These stages may not occur exactly as prescribed by Piaget, but his presentation may serve as a useful reference point for teachers to examine their own students' development and develop appropriate teaching strategies.

Bruner

Another theorist who offers insight into developmental theory is Jerome S. Bruner. His work follows Piaget rather closely. Bruner describes the following three progressive modes of representation of the world:

Enactive: The child's interaction with objects in his/her world (similar to Piaget's sensori-motor stage).

Iconic: The child's use of symbols, images, and representation; the child is able to recreate a situation and develop imagery. (This point is not evident in Piaget's work and thus this concept in Bruner's work is of worthy of particular note).

Symbolic: The child's use of language and symbols and abstractions (much like Piaget).

Although these modes are presented as separate stages, Bruner does not contend that they are sequential stages. Rather, he bases his concepts on the following:

1. Growth is:
   a. Characterized by increasing independence from immediate stimuli (movement from hands-on, sensori-motor to representation).
   b. Dependent on the internalization of information (memory system).
2. Intellectual growth depends on:
   a. The use of symbols.
   b. The interaction between the student and the environment.

c. The ability to perceive abstraction, time, and alternative solutions.

3. The teacher serves as a role model for the student, showing him/her how to confront problems and helping them learn to learn.

Bruner advocates the discovery approach to learning. This means that the responsibility of learning lies with the learner. His main concern was to teach children to learn so that they might be effective and successful out of the classroom and in everyday life. This approach is especially applicable in the sciences where the process of discovery learning is as much a part of the curriculum as the scientific information.

The implications of Piaget and Bruner for the classroom teacher should focus on the child's ability to process information. The younger the child and/or the more limited the child's exposure to formal schooling the more he/she will depend on concrete factual information and the logical sequencing of materials. As the child's cognitive processes mature the teacher can expect him/her to be able to deal with materials and information which encourage critical thinking and problem solving, understanding complex relationships and the conceptual transfer of knowledge.

These are only a few of the developmental theories that exist. The teacher should not expect to be able to place each of his/her student's at a particular stage at any given time. Rather, she/he should use this information as an aid in recognizing basic developmental patterns of students. This will help the teacher to gear instructional strategies to the range of abilities that might exist in the classroom.

The Affective Domain

The affective domain concerns the development of feelings and emotions in the child. The affective domain encompasses both the environmental conditions which may be affecting the way children learn, and the humanistic conditions which may affect the manner in which they view themselves and others.

Piaget associates affective development with specific stages of his cognitive model:

- Preoperational (2 - 7): The child is just beginning to experience and develop moral reasoning, security and needs, and testing adults/peers (e.g. lying, guilt, concepts of punishment and justice, right and wrong etc.).
- Concrete Operations (7 - 11): The child's will and sense of autonomy are being developed. Judgments of right and wrong are being made. The child begins to challenge rules as they assert his/her opinions and distinguish between lies, deception, and

reality.

- Formal Operations (11 - 15 or older): The child develops personality, a concept of self and self-importance. He/she adapts to society and develops in areas of cooperation, trust, sexuality, and finding an acceptable state of equilibrium within social/cultural norms and constraints.

The environment has a substantial effect on the learner, as does the idea of self and interpersonal relationships. Such considerations (which have direct implications for curriculum design) include self-concept, values clarification, fantasy, security, and group dynamics. Abraham Maslow developed a hierarchy of needs which identified five stages of needs that motivate an individual (Maslow's theory has been discussed in detail in Chapter 1, **Adult Learning**). These need stages include: physiological (food clothing and shelter), safety and security, social and affiliation, self-esteem and self-actualization. Each stage is built upon the previous stage and an unsatisfied need at one stage denies the individual access to the next. Understanding this hierarchy of needs can be valuable tool for the teacher trying to assess a particular phase in a child's learning process and the underlying needs that may be affecting that child's work, motivation, and relationship with peers, parents and teachers.

Psychosocial dynamics were also investigated by Erikson and Rogers. These theorists have hypothesized that significant changes in behavior result from environmental changes. Considerations in the socialization process of all individuals are many and include learning culturally appropriate emotional expression, sex roles, conformity, social behavior, and self-evaluation. The combination of teachers, parents, peers and environment helps shape the individual's perception of dependence, independence, competition, aggression, frustration, fear, anxiety, guilt, and so on.

An effective teacher must be aware of the many factors affecting the lives and attitudes of his/her students. Consideration of affective variables should play a major role in the design of a well-prepared curriculum and understanding the learning capabilities of individual students. For example, a teacher should not assume that an inattentive student is either ignorant or disinterested in the lesson. A careful study of the student to determine the levels of needs satisfaction (as suggested by Maslow) may reveal that the student has critical physiological or safety needs that prevent him/her from participating actively in class.

The Psychomotor Domain

The third major category of learning is the psychomotor domain which involves the relationship of the child's body to his/her world. Psychomotor development, i.e. eye-hand coordination, physical movement, clumsiness, agility, etc. is in constant transition and affects how the child is able to learn. The child's ability to use his/her body and work with his/her hands is critical not only to self-concept but to the ability to earn a living. The teacher needs to consider how to incorporate activities which enhance and develop this domain.

Overall, developmental theory is useful to help teachers determine how they, as individuals, believe that children learn. A teacher's perception of how a child learns directly affects the types of learning experiences that the child will encounter. It is vital, therefore, that each teacher understand his/her concept of how learning occurs. The teacher should decide how best to integrate these theories into successful learning experiences in the classroom.

An obvious and direct application of developmental theory is writing objectives for classroom activities. These objectives can be directed to help children develop in the different domains of learning. (For a description of how objectives can be written to address the cognitive, affective and psychomotor domains see the section on **Instructional Objectives**).

Information Processing

Ultimately, what a child learns depends as much on how they perceive the world as it does on how they develop and work with the information they receive. Information processing refers both to the basic sensory perception experienced by a child and the individualized learning style that a child develops.

Basic Sensory Perception

Five perceptual systems determine how a child acquires information. They are: hearing, sight, touch (and movement), taste, and smell. Perception refers to the entire pattern of understanding developed through these senses. Since each individual learns differently (no matter which stage of development they may fall into) it is necessary for teachers to recognize individual preferences in learning that children possess. The recognition of these preferences determines how a teacher designs learning experiences for groups or for individuals in the classroom.

Research has shown that while we use all our senses to acquire information, individuals tend to favor certain senses over others. The aim of the teacher should be to teach to all of the senses so that each individual can develop fully. However, the teacher's ability to recognize and work with a student in his/her predominant mode can be an effective way to overcome individual learning difficulties.

Learning Styles

Students experience a similar learning process to that experienced by adults. The challenge for the classroom teacher is to maintain a balance between individual learning styles and the needs of the group. The teacher needs to be aware that, as children pass through different cognitive stages, they demonstrate a preference for a particular style of learning. Each style of learning is keyed to a particular instructional and corresponding learning strategy (see the section on **Adult Learning** for more details). Four of these learning and instructional strategies are:

- Some learners are primarily interested in facts and need the teacher to demonstrate, lecture, explain and clarify.
- Some learners are primarily interested in personal meaning and need teachers to give a reason, discuss and answer questions.
- Some learners are interested in how things work and need to experiment and have interaction with peers and the teacher.
- Some learners are interested in self-discovery and need to teach themselves as opposed to being taught.

Students will benefit most when assisted in using a variety of learning strategies. Some styles may be more apparent at different developmental stages and considerations for curriculum development are significant. For example, students in Piaget's formal operations stage (approximately 11 - 15 years of age) might be most interested in exploring issues for themselves as they are in the process of developing their self-concept and determining how they fit into the society. They are certainly more ready for self-discovery and experimentation than most children in a preoperational stage of development (see Kolb's learning styles model in Chapter 1, **Adult Learning** for a further look at this topic).

Children as well as adults continually fluctuate between stages in the learning process. Their ability or inability to process information may be hindered or heightened by any of the considerations reviewed in this section. Each child has a preferred learning style and the teacher should be aware of these preferences when designing classroom activities. It is also up to the teacher to introduce other learning styles to students so that they learn to learn in as many new ways as possible and thus become more critical and able to solve problems more effectively. The teacher thus assists in maintenance of a learning mode and assists the child in the development of other modes.

Grouping Strategies

One possible classroom application of child and adolescent learning is the strategy of grouping students for learning activities. Student learning styles may be addressed by working individually, working in pairs, in small groups, with peers or with adults. Grouping strategies should address as many aspects of the students' learning styles as possible and be appropriate to the developmental capacities of the students. This is not always possible due to the number of students in the class, time factors, materials available, space, and so on. Some possibilities for grouping when possible are:

- ABILITY - students with similar reading abilities, for example, can be grouped together their progress facilitated at an appropriate speed.
- TASK - students working on the same assignment help each other.
- INDIVIDUALIZED CONTRACTING - an individual student and the teacher can write a contract which outlines work that the individual is responsible to complete. This work is accomplished by the individual with the support and direction of the teacher.
- LEARNING STYLE (homogeneous) - students who have preferred learning styles, (either perceptual or information processing) work together with students of the same preference to help support and maintain information processing skills.
- LEARNING STYLE (heterogeneous) - students who have preferred learning styles work with students with different learning styles to help develop new processing skills.
- RANDOM - Students count off and are assigned to work in groups according to no particular logic. Randomizing students can break up tight sub-groups in a class and help students learn to share learning strategies and work with all classmates to establish social relationships and create a more cohesive class spirit.

When a teacher is faced with an entire classroom of students, he/she must be aware that all learning styles are at work. Cognitive, emotional, environmental, physiological and psychological needs all make up the learning process and must not be ignored but rather embraced in the planning of classroom activities and learning experiences.

Considerations in Cross-Cultural Settings

Since most of the research on learning styles has been developed in the West, there have been many questions raised as to its applicability to Third World settings. Indeed, there are many places in the world where these theories are considered entirely inappropriate and are openly criticized for their cultural biases. Some of these biases have been addressed in research which combines cultural anthropology and education. Further research is concerned with questions about kinship, castes, cultural norms, societal organization, values and taboos, and different aspects of cross-cultural education (much is available in English as a Foreign Language materials where culture, language and societal norms are discussed). Before presenting content to host country nationals you should become familiar with the theory of and attitudes toward learning styles of children and adolescents in the country where you are training. This will give you a clearer picture of which theories might best facilitate learning in your host country.

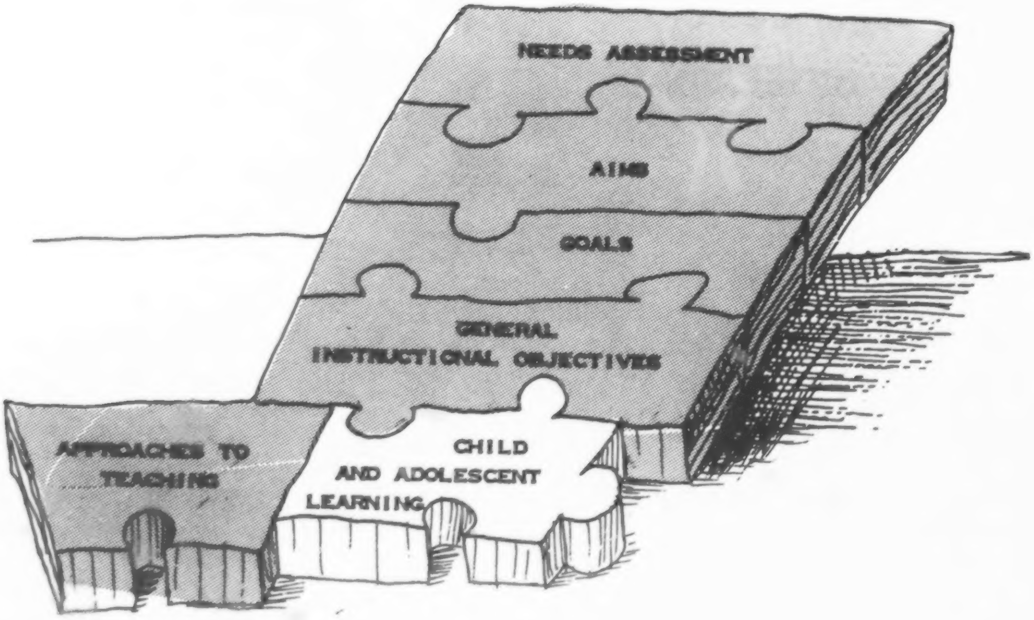
ACTIVITY BOX

1. Observe a group of children or adolescents in your host country. Can you identify different developmental stages? Can you identify some perceptual preferences of individuals? How might these differences be addressed in the classroom?

2. Imagine a classroom with 35 students of different ages. What might be some of the developmental capabilities you would try to identify? What strategies might you devise to meet the various needs of a diverse group?

3. Design a game for a group of children that would be fun and challenging for them and would help you recognize different developmental capabilities. Go out into the community and find a child's game of the host country that might help you accomplish this.

4. A developmental profile is a tool for teachers to use when trying to record changes in students' development. An example of a developmental profile shown in the **Appendix.** It might help you categorize some of the important aspects of development and learning styles that have been discussed in this section. What other areas would you include on a developmental profile that could help teachers meet the needs of students?


NEEDS ASSESSMENT
AIMS
GOALS
GENERAL INSTRUCTIONAL OBJECTIVES
APPROACHES TO TEACHING
CHILD AND ADOLESCENT LEARNING

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SUBJECT-SPECIFIC CONSIDERATIONS

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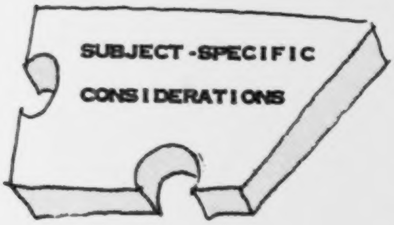
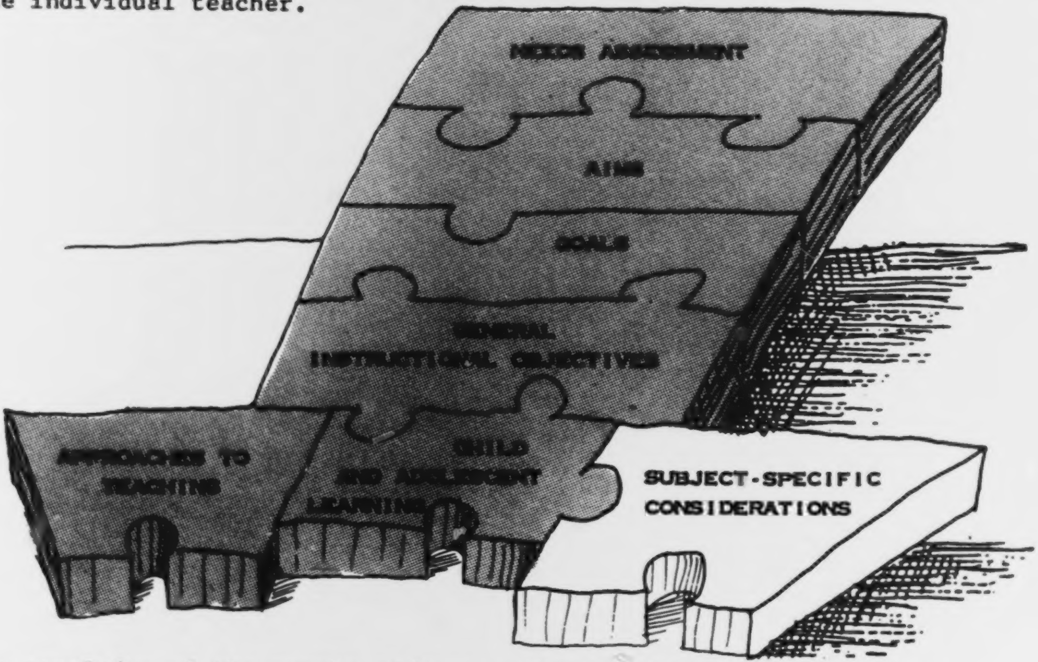


Each subject has its own special set of considerations which influence the teacher's choice of objectives, instructional materials and techniques and, in general, the design of the lesson or unit he/she is planning. Too numerous to mention in isolation, this chapter attempts to present, with examples and references, subject-specific considerations in the context of other aspects of the educational process. Within each section the teacher will find scattered references to teaching English, mathematics or the sciences. It is assumed that the teacher will be responsible for identifying and considering the special needs for a their particular subject when implementing any of the recommendations presented in this chapter.

This is an appropriate time to present the educational process puzzle as it has so far been completed. Thus far the teacher has succeeded in wading through the most theoretical of the puzzle topics which provide a general understanding of the educational process that is often beyond the control of the individual teacher.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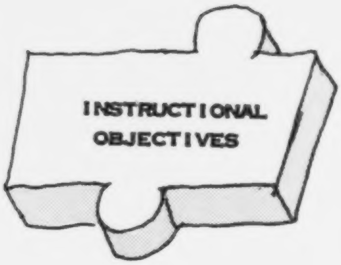
CHILD AND ADOLESCENT LEARNING
SUBJECT-SPECIFIC CONSIDERATIONS

The remainder of the puzzle addresses the specific skills needed to successfully design, implement, manage and evaluate classroom activities. The first of these is the writing of clear and concise instructional objectives.

INSTRUCTIONAL OBJECTIVES

INSTRUCTIONAL OBJECTIVES



Knowing how a child learns is helpful, but it is not the end of the educational process. The teacher then needs to use this information in the classroom and, ultimately, determine how much and how well the student is learning. The clearer a teacher can be in identifying which activities demonstrate mastery of a particular topic, the easier it is for him/her to set up learning activities, the student to carry these out, and the teacher to evaluate the student's performance.

Writing a Complete Objective

An objective is a statement which identifies exactly what the student should do, how well it should be done, and how long it should take or under what conditions the given task should be completed. The more exact the teacher is the easier it will be for him/her to evaluate the student's performance. Thus, if the teacher states an objectives in terms of specific behaviors, the success or failure of a student can be easily observed. Any complete instructional objective has the following three parts:

- Type of behavior - the specific action or performance expected of the student.
- Condition - the circumstance(s) under which the behavior is to be demonstrated.
- Criteria - the degree or level to which the behavior must be demonstrated to be acceptable.

Example: Given the picture of a flower (condition), the student will be able to label the different parts (behavior), with fewer than three mistakes (criteria) and complete the task in five minutes (condition/criteria).

As you can see, an instructional objective can state each of the three parts in any order as long as they are included and a complete and accurate picture of the expected performance is drawn. In most cases, time is considered a condition and not a criteria of performance. In cases where speed is an asset, time may be a primary criteria of performance. In any case, the teacher should be clear as to whether time is a condition, a primary criteria, or both; otherwise, measurement of student performance based on the objective will be impaired.

Categories of Instructional Objectives

In the previous section child and adolescent learning was described as taking place in three primary domains: cognitive, affective, and psychomotor. If this is where learning occurs, then instructional objectives should necessarily be aimed at each of these domains and the teacher should have a strategy for accessing each. The next few pages will guide you.

Instructional objectives can be divided into three basic categories:

Type of Objective	Example of Objective
° **Cognitive** objectives, which deal with **knowledge**	The students will be able to solve four out of five linear equations, without the aid of outside materials, in one hour.
° **Affective** objectives, which deal with **attitudes**	The students will demonstrate their acceptance of the rule "quiet while others speak" by not talking during any of the two minute speeches.
° **Psychomotor** objectives, which deal with **skills.**	The students will demonstrate their ability to serve a volleyball with accuracy by completing eight out of ten overhand serves within the standard court lines.

Benjamin Bloom, an educational theorist, suggests that each domain not only has its own type of objective, but has many levels that the objective should test as well. Known as Bloom's Taxonomy of Educational Objectives, the levels presented below are considered hierarchical, with each new level building on the previous one and representing higher intellectual, emotional or physical attainment.

Cognitive

1. Knowledge - ability to recall previously learned material.
2. Comprehension - ability to grasp the meaning of material.
3. Application - ability to use learned material in new a concrete situations.
4. Analysis - ability to break down material into component parts and understand its organizational structure.
5. Synthesis - ability to put parts together to form a new whole.
6. Evaluation - ability to judge the value of material for a given purpose.

Affective

1. Receiving - becomes aware of an idea, process, or thing; is willing to learn or try a particular behavior.

2. Responding - actively participates; responds obediently, then willingly and receives satisfaction from responding.

3. Valuing - accepts worth of belief attitude, value or ideal; expresses preference for it; develops a commitment to it.

4. Organization - conceptualizes values; compares, relates, synthesizes and organizes values into hierarchy.

5. Characterization - allows values to control or guide behavior; integrates values into a total philosophy of life.

Psychomotor

1. Perception - becomes aware of action to be performed through senses.

2. Set - becomes ready to act mentally, physically and emotionally.

3. Guided Response - performs action under supervision through imitation or trial and error; involves practice.

4. Mechanism - performs action habitually with some degree of confidence; involves increased efficiency.

5. Complex Overt Response - performs action automatically without hesitation and with high degree of skill.

6. Adaptation - can modify action and skill to deal with problem situations.

7. Origination - creates new movement patters to fit a particular situation or problem.

The levels of each domain are presented here not for memorization, but to illustrate the levels of ability that exist within each domain. Objectives cannot start at the highest level of the hierarchy without some preliminary work at the lower levels. A teacher should not expect his/her students to evaluate material they have neither read nor understood, just as one would not expect the child who is just beginning to walk to play a running game of football or demonstrate an original dance step. In forming objectives and observing students' performance, remember that failure to achieve an objective may indicate that an earlier objective was never met.

A look at key verbs that can be used to form objectives at each level of the three domains may help to clarify the differences between them. The chart on the next two pages is meant to supply the teacher with a series of verbs that are both observable and measurable. Finding these verbs is often the most difficult part of writing a clear and complete objective. If the teacher can refer to these lists on a regular basis, the writing of objectives should be that much easier.

Verbs to Use in Writing Objectives

The Cognitive Domain

1. KNOWLEDGE

Defines, Describes, Identifies, Labels, Lists, Matches, Names, Outlines, Reproduces, Selects, States

2. COMPREHENSION

Converts, Defends, Distinguishes, Estimates, Explains, Extends, Generalizes, Gives examples, Infers, paraphrases, Predicts, Rewrites, Summarizes

3. APPLICATION

Changes, Computes, Demonstrates, Discovers, Manipulates, Modifies, Operates, Predicts, Prepares, Produces, Relates, Shows, Solves, Uses

4. ANALYSIS

Breaks down, Diagrams, Differentiates, Discriminates, Distinguishes, Identifies, Illustrates, Infers, Outlines, Points out, Relates, Selects, Separates, Subdivides

5. SYNTHESIS

Categorizes, combines, compiles, Composes, Creates, Devises, Designs, Explains, Generates, Modifies, Organizes, Plans, Rearranges, Reconstructs, Relates, Reorganizes, Revises, Rewrites, Summarizes, Tells, Writes.

6. EVALUATION

Appraises, Compares, Concludes, Contrasts, Criticizes, Describes, Discriminates, Explains, Justifies, Interprets, Relates, Summarizes, Supports

The Affective Domain

1. RECEIVING

Asks, Chooses, Describes, Follows, Gives, Holds, Identifies, Locates, Names, Points to, Selects, Sits Erect, Replies, Uses

3. VALUING

Completes, Describes, Differentiates, Explains, Follows, Forms, Initiates, Invites, Joins, Justifies, Proposes, Reads, Reports, Selects, Shares, Studies, Works

2. RESPONDING

Answers, Assists, Complies, Conforms, Discusses, Greets, Helps, Labels, Performs, Practices, Presents, Reads, Recites, Reports, Selects, Tells, Writes

4. ORGANIZATION

Adheres, Alters, Arranges, Combines, Compares, Completes, Defends, Explains, Generalizes, Identifies, Integrates, Modifies, Orders, Organizes, Prepares, Relates, Synthesizes

5. CHARACTERIZATION

Acts, Discriminates, Displays, Influences, Listens, Modifies, Performs, Practices, Proposes, Qualifies, Questions, Revises, Serves, Solves, Uses, Verifies

Psychomotor Domain

1. PERCEPTION

Chooses, Describes, Detects, Differentiates, Distinguishes, Identifies, Isolates, Relates, Selects, Separates

3 4 & 5. GUIDED RESPONSE, MECHANISM, COMPLEX OVERT BEHAVIOR

Assembles, Builds, Calibrates, Constructs, Dismantles, Displays, Dissects, Fastens, Fixes, Grinds, Heats, Manipulates, Measures, Mends, Mixes, Organizes, Sketches, Works

2. SET

Begins, Displays, Explains, Moves, Proceeds, Reacts, Responds, Shows, Starts, Volunteers

6. ADAPTATION

Adapts, Alters, Changes, Rearranges, Reorganizes, Revises, Varies

7. ORIGINATION

Arranges, Combines, Composes, Constructs, Creates, Designs, Originates

If these verbs do not provide sufficient background for how to write objectives, then it is time to sit down, write a few objectives, and begin to see if they meet the three conditions of a complete objective. The teacher who writes objectives should always place them in the context of a specific subject, topic and level of student. For example:

Objective (with behavior, condition, & criteria)	Description of Objective
1. By the end of the lesson (condition), the student will be able to write (behavior) a two paragraph composition in English with fewer than eight mistakes (criteria).	Domain: cognitive Level: synthesis Time period: lesson
2. By the end of the school year (condition), the student will demonstrate his/her support of the reforestation project by organizing and implementing (behavior) a tree planting party with at least ten participants (criteria).	Domain: affective Level: organization Time period: school year
3. By the end of the unit (condition), the student will be able to calibrate (behavior) at least three pipettes (criteria) within a 30 minute lab period (criteria).	Domain: psychomotor Level: complex overt behavior Time period: unit

Avoiding Errors in Stating Objectives

Having the basic characteristics of objectives, an understanding of the domains and levels to be addressed and a supply of measurable and observable verbs, the teacher is ready to begin constructing his/her objectives. Considering the subject, context, aims and goals of a given unit, and the needs of the students, the teacher should be able to develop objectives which provide direction to a given unit. In doing this, however, it is important to avoid the many pitfalls that are commonly associated with objectives.

Below are listed five common errors in the stating of instructional objectives. (Note: the objectives provided as examples of correct objectives are incomplete and, if used in the context of a class session, need conditions and criteria in order to be complete).

1. A common error in stating instructional objectives is to describe teacher activities rather than student behavior.

Wrong: The student will be exposed to the interrogative.
Right: Given three statements, the student will be able to rephrase them in question form.

The first statement indicates what the teacher intends to present, while the second statement is written in terms of the expected outcomes.

2. A second common error in stating objectives is writing objectives in terms of learning process rather than learning product. For example:

The student will:
Wrong: Gain knowledge of the difference between triangles.
Right: Be able to construct three different triangles.

The first statement reflects a process of learning rather than an expected outcome of instruction. The second statement, however, clearly states the anticipated outcome.

3. The third common error in writing objectives is to list the subject matter to be to covered instead of the learning outcomes.

The student will be able to:
Wrong: Know the human respiratory system.
Right: Diagram and label the human respiratory system.

The first statement consists of only a subject matter topic. There is no indication of a learning outcome. The second statement illustrates a clearly stated learning outcome.

4. The fourth common error in writing objectives is to write with covert behaviors which are internal and difficult to observe by another person rather than with overt behaviors, which are manifesting activities that can easily be evaluated by an observer.

The student will be able to:
Wrong: Be concerned about the welfare of others.
Right: Show concern for others by volunteering to help with food distribution.

Subject-Specific Verbs

As a final reference point, here are a few, subject-specific verbs that can be used in writing objectives.

LANGUAGE BEHAVIORS

Abbreviate, Accent,
Alphabetize,
Articulate, Call,
Capitalize, Edit,
Hyphenate, Indent,
Outline, Print,
Pronounce, Punctuate,
Read, Recite, Say,
Sign, Speak, Spell,
State, Summarize,
Syllabify, Tell,
Translate, Verbalize,
Whisper, Write

MATHEMATICAL BEHAVIORS

Add, Bisect,
Calculate, Check,
Compute, Count,
Derive, Divide,
Estimate, Extrapolate,
Extract, Graph, Group,
Integrate,
Interpolate, Measure,
Multiply, Number,
Plot, Prove, Reduce,
Solve, Square,
Subtract, Tabulate,
Tally, Verify

LAB SCIENCE BEHAVIORS

Apply, Calibrate,
Conduct, Connect,
Convert, Decrease,
Demonstrate, Dissect,
Feed, Grow, Increase,
Insert, Keep,
Lengthen, Limit,
Manipulate, Operate,
Plant, Prepare,
Remove, Replace,
Report, Reset, Set,
Specify, Straighten,
Time, Transfer, Weigh

In summary, an instructional objective is a description of what the teacher wants the students to attain or achieve by the end of a given time period. Instructional objectives are derived from curriculum aims and general goal statements and take into account learning styles, models of teaching and subject specific issues.

Well-stated instructional or behavioral objectives are not open to different interpretations. A good and useful objective uses concrete action verbs to describe what the learner will do, feel, and/or think after studying a unit or lesson. Instructional objectives are often the key to a clear and well organized lesson and a starting point for fair and accurate student assessment.

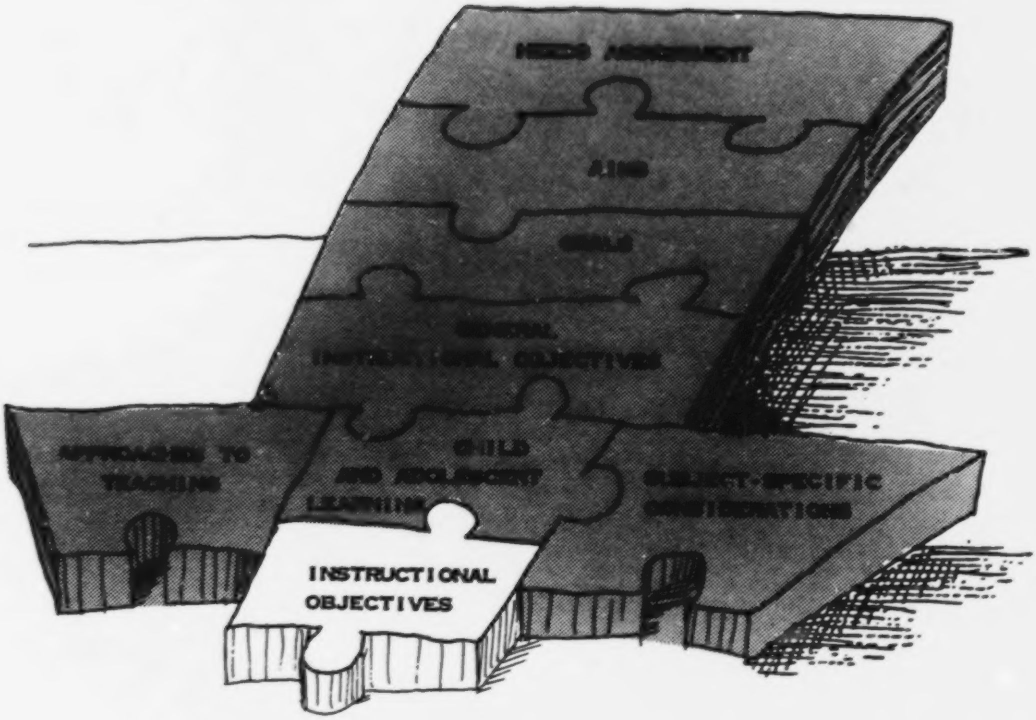
ACTIVITY BOX

1. Choose a topic and write three objectives, one for each of the three domains of learning: cognitive (knowledge), affective (attitude), and psychomotor (skill).

2. Examine each objective to make sure that they are complete (i.e. contain references to type of behavior, condition and criteria) and measurable and observable (i.e. use appropriate verbs).

3. Take the verbs listed in one of the three subject specific lists (language, math or lab science) and identify which domain and level of the domain the verb would fit. (Note: You may need to write a sample objective in order to complete this activity, since the verbs are only as detailed as the objectives).

4. Explain two ways of avoiding errors in writing instructional objectives using examples.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CHILD AND ADOLESCENT LEARNING
SUBJECT-SPECIFIC CONSIDERATIONS
INSTRUCTIONAL OBJECTIVES

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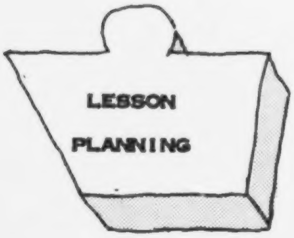
LESSON PLANNING ____________________

LESSON PLANNING



Planning is one of the most important skills a teacher possesses; teachers who plan better, teach better. Each teacher has his or her own style of planning. Some make more extensive plans than others, but one thing is clear: There are few effective teachers who do not make written plans. In this section, teachers' collective opinions about planning as reflected in research studies will be examined. Key steps teachers follow during the planning process will also be described. The goal is to give teachers practical information on how to plan daily lessons, sequence units, and choose the best plan from among alternatives.

Because it incorporates so many skills, planning is a complex and pivotal element of instruction. Teachers will find they need to refer to many other sections of this manual to create their lesson plans. They need to know how to diagnose student needs and learning preferences (**Child and Adolescent Learning**); write clear and concise instructional objectives (**Instructional Objectives**); choose teaching approaches to present content (**Approaches to Teaching**); know when and how to question students (**Classroom Teaching Techniques**); manage the classroom (**Classroom Management**); and evaluate the effectiveness of their instruction (**Student Assessment** and **Self-Evaluation**). Juggling so many factors at once may seem overwhelming to the new teacher. This is why careful planning of a lesson is so necessary, especially in the beginning. Learning to plan well is worth the effort. Many teachers find that, as their planning skills improve, their hours in the classroom become more comfortable and rewarding and their interactions with students improve.

What Teachers Say About Planning

Myths about exactly how teachers plan abound but, until recently, little research data were available about this process. Over the past ten years, however, a number of researchers have observed and interviewed many teachers from the United States to try to discover what makes an effective teacher in this particular cultural context. While some considerations are different for those working outside the United States, many apply to teaching in any formal education system. Some of these research findings are:

- There are five basic types of planning in which teachers regularly engage: yearly planning, long-term planning, unit planning, weekly planning, and daily planning.

- Since pupil attention and time-on-task behavior is associated with achievement, pupil involvement is one of the teachers' first considerations in planning.

- Experienced teachers recommend that beginning teachers write detailed lesson plans, particularly when working with new students, new subject matter, or new procedures.

- In planning curriculum, most teachers start by considering the context in which teaching will occur (e.g. the instructional materials and time available). Next, they think about the goals or general educational objectives (rather than specific instructional objectives). They then think about activities that will motivate pupils. Specific instructional objectives, rather than being created first, are often planned concurrently with the activities.

- Most teachers rely heavily on curriculum guides and textbook materials to determine the content and pace of their lessons.

- Teachers rarely change plans drastically in the middle of a lesson, but do take advantage of spontaneous questions which reinforce objectives.

- Soon after finishing a lesson, teachers plan how a lesson could be improved or varied the next time it is presented.

What's in a Plan

Most curriculum guides cite four key steps that are basic to any kind of lesson planning. They include:

Purpose
Many teachers begin with a brief general statement describing what the lesson or unit is about and then specify a list of sub-topics in outline form from which they write their objectives. Experience has shown that both teachers and students are more effective when they know what is expected.

Where am I going?

Where do I start?

Finding Out Where Students Are
If the teacher has not worked with the group of students previously, it may be necessary to devise some form of formal pre-test to assess their level. Once an experienced teacher has worked with a group of students, she/he may be able to assess students' knowledge of the subject matter more informally. (See **Student Assessment** for specific suggestions).

Devising Instructional Procedures
Looking ahead allows teachers to incorporate variety into teaching strategies which introduce, explain and/or summarize a topic or subject. The level of specificity depends on the planning stage: yearly, unit, daily, etc. Suggestions follow on the next pages.

How will I get there?
TAXI

How will I know when I arrive?

Assessment
Every plan includes provisions for measuring the extent to which the stated objectives were achieved, whether formally through tests or informally (see **Student Assessment** for more detail). In addition to assessing their students, many teachers write a self-assessment and note suggestions for next time.

Planning Daily Lessons

Most teachers incorporate some aspects of each of the following in every daily lesson:

- a brief review of the previous lesson(s),
- an introduction to the new lesson,
- a series of activities to that allow students to learn and practice the lesson content, and
- some form of closure or summing up of the lesson.

Introducing the Lesson

Anyone who has seen a play or watched a movie knows that the first few minutes are crucial for engaging the viewers' attention and setting the stage for events to come. Learning theorists have known for some time that it is important to create an organizing framework for ideas, principles or information to follow. Often telling the student in advance about what to expect enhances achievement. A good introduction:

- Focuses student attention on the presentation by employing an activity, event, object or person that relates directly to student interest or previous experience;
- Provides a structure or framework that enables the student to visualize the content or activities of the presentation;
- Assists in clarifying the goals of the lesson;
- Evaluates or reviews previously learned material before moving to new material;
- Provides a smooth transition from known material to new or unknown material by using examples, analogies and activities;

Learning Activities

The body of the lesson is usually built around an activity or series of activities which provide for explanation and practice of the new information. Most teachers use a variety of techniques in order to accommodate the learning styles of their students. When possible, they plan activities which address the cognitive, affective and psychomotor domains (see **Child and Adolescent Learning** and **Instructional Objectives** for more detail). They also consider the balance between teacher and student centered activities.

One factor related to success of a lesson is time. It is important to learn how to gauge the approximate amount of time an activity requires. While a fast, lively pace is usually preferred, rushing through an activity can be traumatic for both the teacher and the student. Running out of material to teach before the class has finished can be equally unsettling. Teachers should list each sub-topic and write a time estimate next to it on the lesson plan. Writing down the sub-steps also helps the teacher make sure he/she has planned for all the materials needed to teach the lesson, so that valuable class time is not wasted on organizing materials or getting equipment.

Ending the Lesson

Just as the introduction helps students organize the information presented to them at the beginning of the lesson, the ending of the lesson, or closure, plays an important role in how much is retained. Closure:

- draws attention to the end of the lesson;
- helps organize student learning;
- consolidates or reinforces the major points which have been learned.

Too often teachers simply let a bell announcing the end of a class period serve as the end of the lesson. Creating opportunity for closure requires planning. Some closing activities ask students to summarize what they have learned; others give them a chance to practice their new skills, while others relate the material to a new situation. In any case, a good closing activity lets students know "when they have arrived" at the end of a lesson.

Writing a Lesson Plan

One of the most frequent requests of new teachers is for tips on how to format a written lesson plan. The next page gives an example of a lesson plan format. Teacher trainers may find it helpful to have new teachers use this format consistently for a few weeks before adapting their own style. By reviewing teachers' written plans, they can help them with pacing, content decisions and predicting what and how many materials will be needed. Teachers may also want to consult textbook guides, which often format lessons for teachers, to get further ideas. Bound lesson plan books are also sold commercially and may be available in some countries.

Lesson Plan Format

Subject: ______________________________

Topic: ______________________________ Date: ______________

Objectives: This tells what the students should be able to do by the end of the lesson. Each objective should be written in behavioral terms; when possible affective and psychomotor objectives should be included as well as cognitive ones.

Time	Activity/Procedures	Materials
Write an estimate of the time required for step.	The procedures required to teach the activity should be described here in outline form. Be sure to include both what the teacher will do and what the students do. Make provision for review, introductions, practice activities, and a closing closing activity.	Include a list of all equipment and materials needed, how much, how many and preparations which must be done before class.

Evaluation: How will you know that the students have accomplished your objectives? Write down the formal or informal method of assessment you plan to use.

Comments: How would you do the lesson differently next time. What are special points to remember? Is one activity particularly effective?

Sequencing and Long-Range Planning

Although many of the same skills needed for daily lesson planning go into long-range plans for a unit, a semester, or a year, such planning also requires that more attention be given to sequencing. Careful sequencing builds a strong foundation for students' understanding of the relationship between complex parts of one subject. In planning a unit a teacher should write down the:

Topic: What the unit is about.

Goal: A broad goal statement for the unit as a whole.

Objectives: General student performance that will demonstrate learning.

Time: Number of days/hours available for the unit.

Activities: A brief description of activities for each day and week.

Materials: Any equipment or materials which needs to be procured or made ahead of time.

In long-range planning, the sequencing and ordering of material to be presented is even more important. Sequences may be created based on different characteristics, such as time, complexity or internal order. The sequence chosen may depend on the teaching approach used. A teacher using the Advance Organizer approach to the teaching of botany, for example, may first present a chart of the plant family and then, in subsequent lessons, describe each branch. Another teacher might use the discovery method and have students conduct experiments for several days before lecturing about the content. For some skills, like building a house, a relatively invariable sequence may have to be observed. One must lay the foundation and put up the skeletal framework before the walls can be constructed.

Sequencing of ideas or skills can be done in many ways and what is a logical sequence in one culture may not be to another. A Teacher Trainer might consider asking host country colleagues to describe and contrast their organizing systems with those of Western educators. An analysis of lesson planning in the cross-cultural setting should also take into account social customs, habits and taboos.

Types of Sequencing Systems Include:

- From shorter to longer activities.
- From skills of observing, recalling or comprehending to skills of creating.
- From familiar to unfamiliar ideas.
- From easy-to-organize to difficult-to-organize activities.
- From simple to complex ideas.
- From convergent to divergent thinking skills.
- From teacher-directed to student-directed activity.
- From abstract concepts to concrete situations.
- From a concrete situation to abstract ideas.

Planning ahead for long-range activities allows teachers to consider the strengths and weaknesses of different types of sequences and select the most effective one for their needs. In many school systems there may be little room to vary the curriculum, since it is pre-determined by national ministries of education. Varying too much from their sequence, even if permitted, may jeopardize students' ability to cover all the material asked for on standardized tests which allow them to pass from one grade to the next. Fellow teachers and students are often resistent to changing the curriculum in any way. It is suggested, in these cases, that the teacher try making more modest changes in daily or weekly plans, making sure the necessary material is covered even if the order is changed and allowing the students to learn the merits of new approaches gradually, through practice.

Choosing from Alternatives

One of the best ways to increase one's repertoire of teaching skills is to plan and teach two alternative lessons on the same topic. Alternative lessons might utilize different skills or use different models to teach the same general content. A single teacher could plan two alternative models. Or, two different teachers could each plan the same lesson independently and share their plans with one another. Teachers might consider the following questions when comparing their plans:

- Which skills are practiced in this lesson?

- Do students receive group or individual practice in use of these skills?

- What instructional materials are used?

- Is there any provision for student ideas?

- Is there any provision for individual differences?

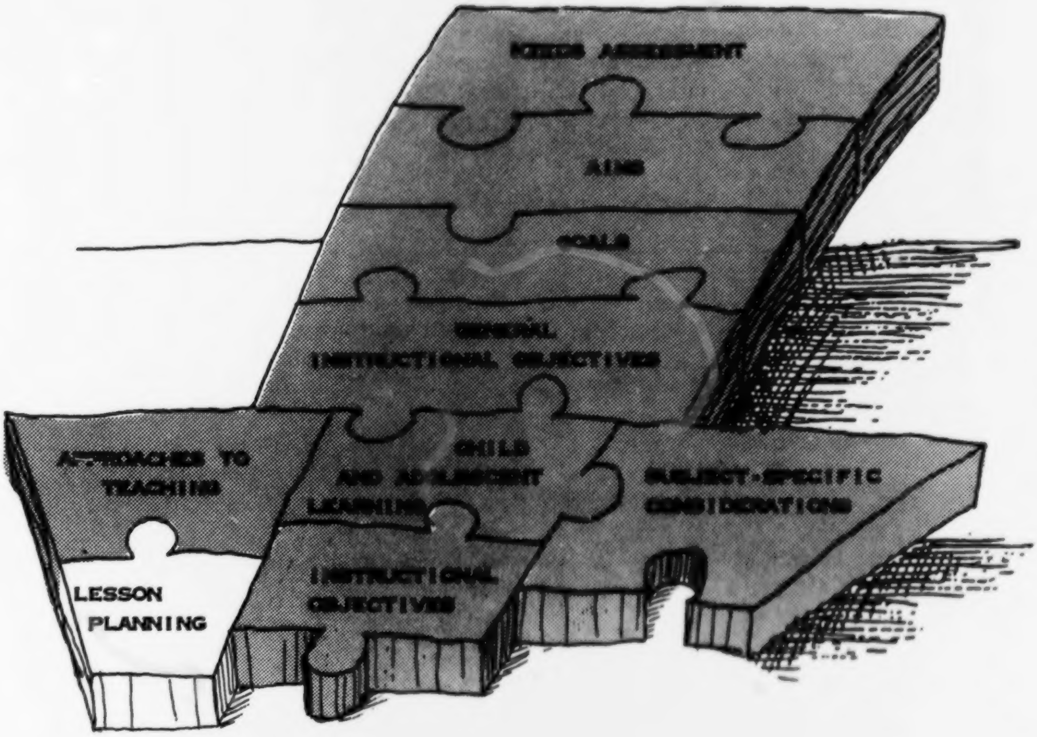
- Is there provision for written feedback to the teacher about what students have learned? What other ways will the teacher evaluate what has been learned?

Teachers may find it useful for one teacher to teach two similar groups of students, using a different plan for each group. The second teacher can observe both lessons and record his or her observations. When both lessons are finished, they can discuss the results of the observation to decide whether or not the lessons were as different as they had originally thought and whether they prefer one model over the other.

This method may be an especially useful tool in schools where most teachers use only one method (usually a highly teacher-centered, lecture-oriented method). By comparing lesson plans, teachers may learn that there are indeed other ways to teach the same objectives without compromising the content that their school system obliges them to cover.

ACTIVITY BOX

1. Design three different ways to open or introduce the same lesson: one for a sleepy group of students, one for a high energy group of students and one for a group of students you have never taught before.
2. Design a unit plan and three sample lesson plans for a subject of your choice. Use the lesson plan format suggested to complete your lessons.
3. Talk to another teacher who is teaching the same topic and level as you. Compare and contrast your lesson plans for the same session.


NEEDS ASSESSMENT
AIMS
GOALS
GENERAL INSTRUCTIONAL OBJECTIVES
APPROACHES TO TEACHING
CHILD AND ADOLESCENT LEARNING
SUBJECT-SPECIFIC CONSIDERATIONS
LESSON PLANNING
INSTRUCTIONAL OBJECTIVES

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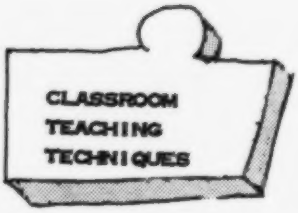
CLASSROOM TEACHING TECHNIQUES



As discussed in the previous section, lesson planning involves the careful balancing of a wide range of variables. One of these variables is the use of classroom teaching techniques. The lesson plan below demonstrates how a variety of teaching techniques can be used in an hour long lesson and introduces some of the techniques discussed in this section.

Subject: English (as a Foreign Language)
Topic: Body parts and clothing Time: 1 hour

Objectives: By the end of the lesson students should be able to:

1. properly name ten parts of the body.
2. properly name five articles of clothing.
3. use the verbs "put on" and "take off" correctly.

Time	Activity/Procedures	Materials
5 min.	**Question/Answer:** Review of items one buys at the store.	Items one buys in a store (taught in previous lesson).
10 min.	**Presentation/Drill:** Clothing (shirt, pants, shoes, socks, hat); parts of the body.	Articles of clothing, blackboard, chalk.
5 min.	**Game:** Simon Says (touch your toe, ear . . .).	None
15 min.	**Presentation/Drill:** "Put on," "take off".	Flash cards
10 min.	**Presentation:** Dialogue or story about buying clothes.	Prepared text on sheets of paper, visual aid, or in textbooks.
10 min.	**Improvised Skits:** Buying clothes. Students play roles of merchant and customers.	Play money, clothing.
5 min.	Copying notes from the lesson (where texts are not available).	Notebooks and pens/pencils.

Evaluation: Oral feedback during question/response activity and assessing student performance during skit activity.

Comments:

Teacher-Centered and Student-Centered Techniques

In many classrooms, the teacher relies heavily on the traditional methods of lecture, recitation from the textbook, and rote repetition. These are classified as "teacher-centered" instruction because they are based on a model of the teacher (usually with a text) as the holder and transmitter of knowledge and the students as passive receivers of that knowledge. In many countries this model has been abandoned by education specialists in favor of a "student-centered" approach.

The student-centered model includes a variety of techniques aimed at active student participation and experiential learning. Often the teacher acts as a guide or facilitator for the activity rather than the dispenser of knowledge. Some of the techniques which we will examine are small groups, brainstorming, role play, games and simulations, individualized learning, student presentations, and dramatic activities. Some of these methods have been describe in the **Training Techniques** section.

The classroom is rarely totally teacher- or student-centered, but rather somewhere on a continuum between these two models. The diagram below places each of the techniques described in this section on such a continuum:

TEACHER-CENTERED **STUDENT-CENTERED**

Rote repetition Drilling Lecture	Recitation Questions by teacher	Teacher-led discussions Field trips	Small group discussions Games, Fishbowl Role play	Brainstorming Individualized learning

◄--►

<----Music and Drama---->

(Teacher as Source of knowledge) (Teacher as Facilitator)

Different techniques can be utilized to complement each other, providing a variety of learning experiences and modes of interaction. In situations where there is a syllabus and/or textbook which the teacher must follow, regular lectures and recitations may be expected. But often other activities can be added to supplement the standard lesson format.

Teacher-Centered Techniques

The Lecture Method

The purpose of the lecture method is to present basic facts or concepts to a relatively large group of students. It is useful in explaining difficult or complex concepts before students engage in an activity (such as an experiment) or read a text. The lecture may also be effective after an introductory activity or demonstration has captured students' attention and sparked their curiosity. Ideally, the lecture is illustrated with visual aids, a model, or a demonstration and includes student participation in some way. With younger students especially, the teacher should avoid talking for a long period without involving students actively.

Teachers should be careful not to confuse the classroom lecture method discussed here with what they may have experienced in their college studies. The lecture as a teaching tool should be more than a talk about the subject matter or a reading or restatement of a portion of the text. The teacher should plan the presentation well to maximize student interest and learning, practice good delivery skills, and use questions and discussion to reinforce the key concepts. Here are some suggestions for more effective presentations:

---

1. Preparation

   - Outline main points and organize in orderly way.
   - Plan examples and illustrations.
   - List key questions or other ways to involve students.
   - Prepare handouts that assist students in listening or note-taking.
   - Prepare visual aids.
   - Plan timing to allow for questions and discussion.
   - Keep presentation as brief as possible.
   - Prepare notes for reference, but not to be read.

2. Introduction

   - Outline main points on blackboard (especially if students are expected to take notes).
   - Generate interest from the beginning: use an attention-getter or thought-provoker (picture, question, story, simple puzzle, exercise).

3. Delivery

   - Maintain eye contact with different students.
   - Vary voice, facial expressions, gestures, and positions.
   - Use humor and surprise.

- Illustrate main points with concrete examples, analogies, and stories.
- Use non-verbal stimuli and illustrations: pictures, models, props, symbols, and gestures.
- Involve students by soliciting questions, examples, and responses.
- Weave in provocative questions and rhetorical questions.
- Check on student comprehension at intervals during talk.
- Repeat and reinforce key words and main points.
- Use silence and pauses for emphasis and to stimulate thought.
- Try using the indirect method by giving false statements or by using faulty reasoning to allow student correction (but use this strategy sparingly and keep it at a simple level).

4. Summary

- End before students' attention is lost.
- Repeat main points.

  -or-
- Guide students to summarize main points.
- Leave some unanswered questions for students to ponder or discuss.

5. Question/Answer Period and Discussion

- Solicit and respond positively to student questions.
- Redirect questions for other students to answer.
- Structure small group discussion with problem to solve or questions to answer.

Question and Answer

Almost any teaching model requires the use of questioning. Questions are powerful teaching tools for stimulating thought and checking student comprehension. They also can be used to encourage quiet students to participate, to promote interest in a topic, and to spark discussion. As in recitation, students' responses will also tell the teacher much about the success of the teaching plan in meeting the objectives. Finally, a question and answer activity can increase motivation and provide variation from more passive forms of learning such as listening, reading, and written exercises.

The teacher should have a repertoire of various kinds of questions which can elicit different kinds and levels of thinking. Although there are many ways to categorize questions, we shall use four major groups:

Direct: (Convergent)	Asks for recall of facts and description from memory.

Probing:	Follow-up question for clarification, expansion, justification, or to redirect response.
Higher Order:	Asks for analysis, evaluation, problem-solving, comparison, cause and effect, or inference.
Divergent:	Asks for opinion, judgment, or interpretations.

Direct questions are questions which require factual recall. Most teacher-posed questions are of this type. Here are some examples:

Is the English word for "livre" student?	(yes/no form)
Did Faraday or Edison discover electricity?	(either/or form)
What is the formula for the area of a circle?	(wh-word form)
Where are the kidneys located?	(wh-word form)

While these questions may indicate student recall from the reading or class activity, little independent thinking is required, and the student may or may not understand the answer she/he is giving. Direct questions are "closed" - usually there is only one correct response. Direct questions are useful, but they should be combined with other types of questions.

In the examples above, you may have noticed three forms which questions can take: **yes/no, either/or** and **wh-word.** The teacher should note that yes/no and either/or questions are highly structured and usually have only one possible correct response. While they may be useful to check student comprehension and learning (especially on a written quiz), they do not allow much opportunity for the student to express what he or she is thinking. Teachers should try to mix these forms of questions with the more open wh-word form.

Probing questions are used to follow up an unsatisfactory or incomplete student response by asking the same student or others to think more deeply and improve the response. Some examples are:

What do you mean by __________?	(clarification)
Could you say that in another way?	(restatement)
Yes, but why?	(justification)
Could you say more about that?	(expansion)
Jose, what do you think about that?	(redirection)

Non-verbal probes such as a nod, a smile, or a gesture and short verbal probes such as "Yes," "I see," "Uh-huh,"can also encourage students to say more or rethink their responses.

Higher order questions are analysis questions which require more abstract or conceptual thinking. They challenge the student and are more open-ended than direct questions. While based on factual knowledge, the responses involve critical thinking and analysis. Here are some examples of different types of higher order questions:

What do you like about this poem and why?	(evaluation)
What evidence can you give that the earth is round?	(inductive inference)
What conclusion can you draw from your observations?	(deductive inference)
How would you find the area of this figure?	(problem solving)
What makes a balloon expand?	(cause-effect)

Notice that the **wh**-word form is common in higher order questions because these questions often ask **why, what, and how.**

Divergent questions ask students to express opinions, make judgments, and offer interpretations. Because they are open-ended questions with many possible answers and no right or wrong, they can stimulate the imagination. Divergent questions are especially useful in language classes learning creative writing and discussing literature.

What is your reaction to _____________?
What is your opinion, Mohammed?
What would the earth be like without trees?

Mastering the skill of questioning, as with other skills, requires practice. Here are some suggestions for effective questioning techniques:

- Organize students in U-shape or circle if possible.
- Scatter questions widely around the class with alternating response patterns: (individual, row, whole class, etc.).
- Encourage responses by giving some positive reinforcement for all responses, including incorrect ones. Use verbal and non-verbal means to show degree of approval (nod, smile, writing answer on board...).
- If a student gives an incorrect or incomplete response, restate the question or give a hint and allow him/her to try again.
- Model listening behavior - listen attentively to all responses.
- Maintain eye contact during question and answer.
- Allow time for thought and response. Pause after the question.
- Keep questions short, clear, and focused.
- Base questions on experiences, inferences, and other sources in addition to text.
- Use questions that require thought, mixing provocative higher-order questions with factual ones.
- Mix questions requiring objective and subjective responses.
- Ask for several responses to open-ended questions.
- If necessary, restate correct responses so that other students hear clearly.
- Offer prompts or hints or rephrase your question if students have trouble giving a good response.
- Redirect and probe to involve more students and stimulate peer learning.

- Use probing questions to encourage deeper thinking and improved responses.
- Try asking questions for which you do not have the answer.
- In language classes, have whole class repeat the student response for practice. Model questions and allow students to ask each other.

Recitation and Drill

Recitation is a traditional technique in which the teacher or student reading of question from the text and the students recite answers which they find in the textbook or have memorized. Because recitation involves rote answers and repetition of answers from the text, overuse can produce monotony and boredom in the classroom.

Drill is a technique to aid in memorization and pattern learning in which the teacher asks short questions or gives cues and students respond. It is frequently used in language classes for pattern and vocabulary practice. Most language textbooks include pattern drills which range from simple repetition to transformation and translation drills. Drills are usually structured so that students are mostly able to give the correct response quickly. While the teacher usually provides cues and indicates whether the response is correct, students can drill each other in pairs or small groups. Visual or taped cues can be used to add variety to drill exercises.

The chart below shows eight major types of drill commonly used in language teaching.

type of drill	examples	
repetition	cue:	She told me about the book.
	response:	She told me about the book.
substitution	cue:	She told me a story. him
	response:	**She told him a story.**
correlation	cue:	He is going home. they
	response:	**They are going home.**
transformation	cue:	We saw the movie. negative
	response:	**We didn't see the movie.**
joining sentences	cue:	They're happy. She's coming home.
	response:	**They're happy that she's coming home.**
rejoinder	cue:	I have a brother. What's his name? I have a sister.
	response:	What's her name?

expansion	cue:	She told me about a book. good
	response:	**She told me about a good book.**
translation	cue:	J'ai lu un livre.
	response:	**I read a book.**

Although drilling is most widely used in language classes, it has other applications where memory is required. For example, mathematics teachers might use a drill for aiding student memory of multiplication tables. Since drilling also involves much repetition and structured response, it should be alternated with other techniques. Generally, recitation and drilling should not exceed five minutes.

Student-Centered Techniques

The seven student-centered classroom techniques which follow are discussed in greater detail in Chapter 1, **Training Techniques.** What follows here is a short description of each technique and a some examples of possible classroom and subject-specific applications.

Small Group Formation

As was discussed in the section on **Child and Adolescent Learning,** breaking up a class into groups immediately multiplies the amount of student activity and participation. The advantages in using small group formations are numerous and, though they may require a special management style, group work can be used to the benefit of both student and teacher alike.

Considerations in Forming Groups

Groups need not always engage in the same activity. The teacher can structure groups according to ability, needs, specific skills, or interests. Groups can be assigned special activities and the teachers can devote time to specific student needs and interests which would be impossible to address with the whole class. While the teacher is working with one group, other groups might be working on a group project, playing a game, solving a problem, or working on individual projects. For debates and contests, the class can split into two groups. If these groups are still too large for student interaction, try four or more groups. For discussion and projects, five or six students per group usually is an ideal number, but this depends on both the activity and the students.

Subject-Specific Applications

In science classes, groups might conduct experiments or make observations; in language classes groups might write and act out a skit, play a word game, or have a structured discussion. Math students might play number games or work out problems individually, in pairs or in small groups.

After a presentation by the teacher or a text reading, the class can form small discussion groups to address questions chosen by the class or the teacher. One way of organizing these groups is to give each student a role in the group: discussion leader, recorder, timekeeper, reporter, and process observer. Following discussion the class re-groups, and the reporter from each group makes a short summary of his/her group's conclusions.

Pairs (also called "diads") are especially suitable for language practice, mini-debates in social studies, and peer quizzing in any subject area (see the **Training Techniques** section for a more detailed discussion of diads and triads).

General Suggestions for Small Group Interaction:

- If possible, move chairs into small circles (if chairs cannot be moved, use the floor, outdoors, squat, or stand).
- Make activity clear before class breaks into groups.
- Teacher can travel from group to group as facilitator.
- Mix up groups for different activities.
- Discuss small group process with students. Encourage participation, listening, cooperation, and helping.
- Alternate small group with whole class activities.

In certain cases, small group activities may be difficult to implement because of the physical limitations of the classroom and expectations of more traditional teaching methods. The teacher should, as with all new methods, introduce the use of small groups gradually and with care.

Brainstorm

Brainstorming is an excellent way to stimulate children's imagination and creativity. As an activity to generate ideas and suggestions from students with maximum participation and minimum risk, it might be used to generate possible topics for writing, a list of random numbers, situations for a role play, ideas for independent projects or words for a language lesson.

Role Play

Role playing is not only a powerful tool for adult education and teacher training, but also is effective in the classroom. Role playing is especially suitable for language and social studies classes. Role playing is a highly motivating activity because students can learn through experience and apply their learning in a relevant, yet relaxed, low-risk situation. It can help to promote student-student interaction, encourage empathy for others, and develop social skills and values.

In language classes, the teacher can use the role play to reinforce patterns and vocabulary, to place language in cultural contexts, and to encourage students to use the language creatively. The teacher should first prepare the class with the basic vocabulary and patterns which the role play will require.

In sciences and math, abstract, dry concepts can be given personality, humor and life through role plays (interaction of atoms and molecules, variations in geometric forms, etc.) and historical figures can bring scientific and mathematical debates to life in the classroom.

Games and Simulations

Games and simulations have much in common with role playing in terms of increasing motivation, student participation, and interaction.

A game is any learning activity with rules, competition, winners and losers. The players learn while playing the game, and may use their knowledge in some way to win the game. Games can be adapted to reduce competition and encourage cooperation by having rotating teams or changing the game's objective. Games are frequently used for language and mathematics practice, but can be adapted for any subject.

A simulation is a learning activity that is designed to reflect a real situation or system. Simplified simulations can be designed by teachers to help students understand other cultures, societies, and historical periods.

Although many learning games and simulations are produced commercially, for use in non-Western settings, they are best produced by the teacher to suit the particular students, the culture, and curriculum at hand. Look for games that are played in the community where you are teaching and try to adapt them to the learning goals. In this way the students will be familiar with the rules and method of play. Games are best suited for introducing a new unit to capture interest or as a final experience to put learning in perspective.

Games should be structured to maximize participation and learning. If competition becomes too important losers may lose interest and the learning goals may be lost. In cultures where competition is not valued, the teacher should look for ways to decrease competition (use of teams, rotation of members among teams, etc.) or eliminate it altogether. It is important to plan time after the game or simulation for discussion of the key concepts and students' experiences and questions. (For more step by step information on how to develop and use games and simulations, see David R. Evans' book: Games and Simulations).

Drama and Music

Drama and music are highly motivating activities for students of all ages. They also provide variety in lesson plans for teacher and student alike.

Dramatic activities include skits, structured improvisation, free improvisation and full scale plays. They are most useful in language classes. Students unaccustomed to improvisation should first be given more highly structured roles and situations such as those previously discussed under role play. Written skits are also a good way to begin using drama in the classroom. After students have become comfortable with their roles in the skits, they can be encouraged to make changes in their lines, which will lead to freer improvisation. (For some excellent suggestions on using drama in the language classroom, see Maley and Duff in the reference section.)

Music and songs are excellent methods to involve students and introduce cultural aspects. New words to popular songs can be written by the language teacher to reinforce patterns and vocabulary. Folk and popular songs can be taught in social studies and language classes to add a cultural dimension.

Field Trips

Field trips help link the real world to the classroom, show how studies can be applied and bridge the gap between classroom and community. Appropriate field trips can be planned for any subject. Science classes can conduct observations of nature and collect specimens, social studies classes can engage in local community investigations and interview members of the community, and mathematics classes can measure and time any number of objects or events. For the foreign teacher, a field trip may be a way for the teacher to learn from his/her own students. Such mutual learning is an excellent way to develop a positive relationship between students and teacher.

Individualized Learning and Student Projects

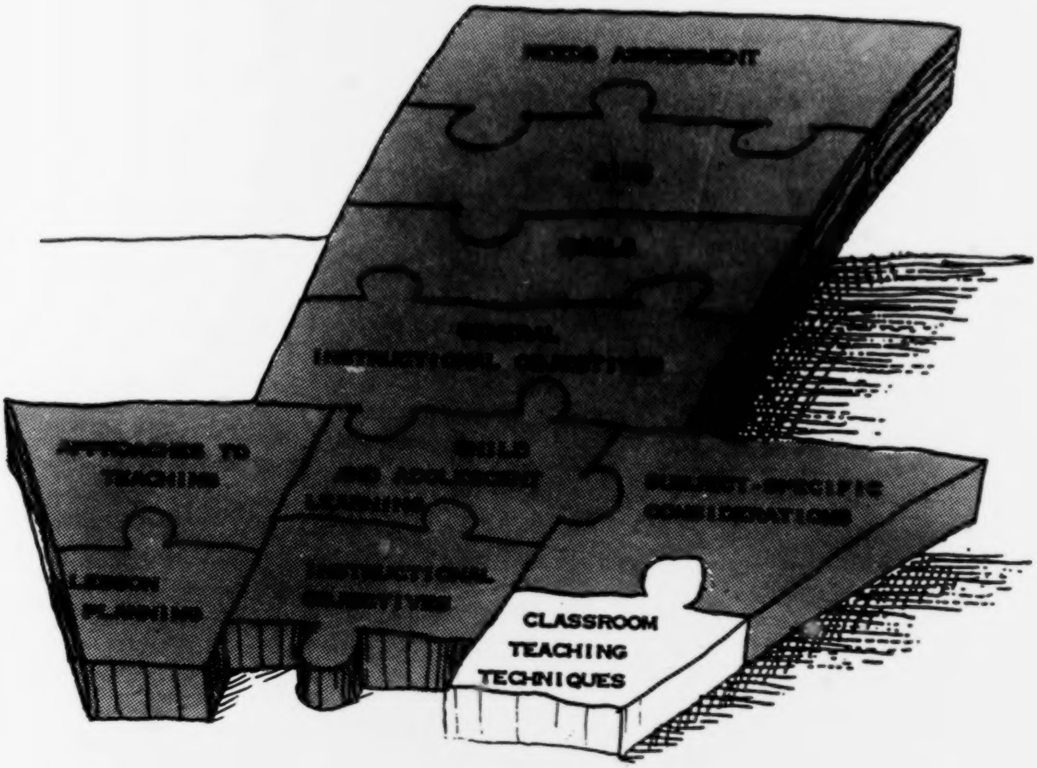
Individualized learning is an approach which can help to solve the problems of teaching a mixed-ability group, students with individual learning difficulties, or students with special interests. By setting up self-contained units for individuals to follow, the teacher allows individual students to learn at their own pace and to pursue their own interests.

Individualized learning can take many forms, but most involve packages or short activities for students to follow. Each activity has directions and objectives. Often a self-test or self-check is included. Some packages may be a series of sequential activities with problems, solutions, and multiple-choice tests at each stage. This is sometimes referred to as "programmed learning" and is also being developed for computer-assisted instruction. Remedial units can be developed for students with special learning problems and advanced units for those who are learning at a higher level than others in the class. The advantage of individualized learning is that these students do not need to be labeled or taken away from the class. Remedial learning can also benefit from the pair group formation, using peer instruction.

Individual projects designed by students with the guidance of the teacher is another form of individual learning. In science classes, this may be an excellent way for students to learn research and lab skills. Interrelated units can be studied by groups of students who, in the process, learn library, writing, presentation and even testing skills. Independent projects allow students to pursue their own interest and share them with other students during class presentations. An additional benefit is that projects often bridge several disciplines, for example, a project on Louis Pasteur might combine information from the sciences, French, and social studies.

ACTIVITY BOX

1. Design an idea for a learning game. Consider your topic and describe the number of players, object of the game, learning goals, materials needed, etc.
2. Write three questions of each type (direct, probing, higher order and divergent) for a specific lesson and topic of your choice.
3. Think of a lesson for which a role play might be appropriate. Write each role description on a note card and two to three different settings/situations for the roles to be enacted.


NEEDS ASSESSMENT
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MATERIALS DEVELOPMENT AND RESOURCE UTILIZATION

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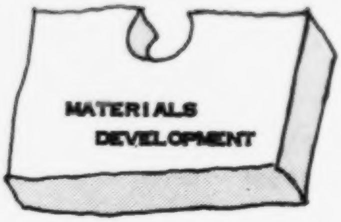


During the course of a year, in just about any subject, the time comes when the teacher needs to use something other than his or her own voice and gestures to present course content. To most people educated in Western industrialized nations, this statement may seem all too obvious. In the context of many developing countries, however, audiovisual aids and materials are often unavailable and the teacher is left with two choices:

1. To rely on simple materials which may be produced either by the teacher or a local facility; or
2. To adapt materials which may have been produced for a different country or even a different, if related, subject.

For the most part, instructional materials in the classrooms of Third World countries are limited to blackboard, chalk, paper, pencil and, in the more fortunate cases, textbooks.

Even so, there is a great deal that the individual teacher can do in this context to enhance his/her delivery of instruction. This section discusses the ways in which teachers, with limited raw materials and supplies, can produce valuable instructional materials. This section will also address proper presentation procedures for the introduction of visual aids in the classroom and considerations about the appropriate use of certain teaching aids.

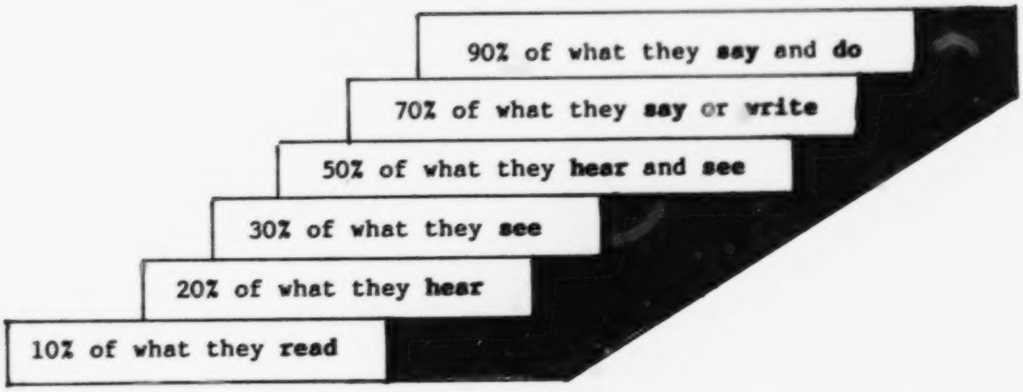
Instructional Materials and the Learning Process

Two basic principles should be considered when using instructional materials:

1. Teachers, whether poorly trained or highly competent, remain the most influential part of the learning process. (Materials merely assist in the instructional process; the teacher provides the primary source of direction in learning.)

2. The amount of information a student retains is directly related to how that material is presented. This concept can be presented as a series of steps leading to the greatest retention of knowledge:

What People Remember


90% of what they say and do
70% of what they say or write
50% of what they hear and see
30% of what they see
20% of what they hear
10% of what they read

Materials used in education can be categorized by the type of information they contain and which of the senses are required to make use of that information:

Written materials (sight) such as texts or readers provide detailed information through the use of the written word.

Visual aids (sight) provide graphic and/or written information which usually supplements an oral presentation (hearing).

Audio tapes and records (hearing) provide information through the spoken word (and may or may not be used with other types of materials).

Film, slide/tape, and videotapes (sight and hearing) use visual, audible and written means to present information.

Real Objects and Models (touch/kinesthetic) coordinates visual presentation with touch to present information.

It is the teacher's responsibility to decide which types of materials are appropriate for which types of learning activities. The table on the following page, based on a media selection model by William Allen at the University of Southern California, should help the teacher with this decision. It provides information as to how certain instructional media relate to specific learning objectives.

	Learning Objectives					
Instructional Media Type	*Learning Factual Information*	*Learning Visual Identifications*	*Learning Principles, Concepts, and Rules*	*Learning Procedures*	*Performing Skilled Perceptual-Motor Acts*	*Developing Desirable Attitudes, Opinions, and Motivations*
Still pictures	Medium	HIGH	Medium	Medium	low	low
Motion pictures	Medium	HIGH	HIGH	HIGH	Medium	Medium
Television	Medium	Medium	HIGH	Medium	low	Medium
3-D objects	low	HIGH	low	low	low	low
Audio recordings	Medium	low	low	Medium	low	Medium
Programmed instruction	Medium	Medium	Medium	HIGH	low	Medium
Demonstration	low	Medium	low	HIGH	Medium	Medium
Printed textbooks	Medium	low	Medium	Medium	low	Medium
Oral presentation	Medium	low	Medium	Medium	low	Medium

Source: "Media Stimuli and Types of Learning." *Audiovisual Instruction.* Reprinted by permission of Association for Educational Communications and Technology. Copyright 1967.

Allen Media-Selection Model

Based on this information it is easy to see the advantages of using instructional materials in the classroom and how each type of material triggers certain senses and supports certain types of objectives and lessons more than others. The teacher must examine the content of the course and choose the appropriate way of presenting the information in order to maximize both instructional and learning processes (see **Child and Adolescent Learning**). The relative success that he/she has in doing this, of course, will depend on how available certain materials are. Teachers who believe that there are virtually no materials or supplies available should not despair. This section of the manual will help them to realize that many useful instructional materials can be located or, if necessary, produced using low cost materials and supplies in their immediate environment. The first step towards providing materials for the instructional setting is in determining what is and - probably most important - what is not available.

Using What is Available

Before deciding on which types of materials are appropriate for a given lesson, the teacher must locate which materials, if any, are at his/her disposal. Most often, and for just about all subjects, the only real materials present in the classroom will be a blackboard and possibly some chalk. In many cases these too may be unavailable. In each case the **needs** of the teacher must be weighed against what is **available.**

Needs: Reviewing unit and lesson plans will give the teacher some indication of the types of materials required. Whether based on a chapter, a section out of a text or a lab exercise, the teacher should review his/her plan and make a list of what materials are needed so that they can be located before the lesson(s) begin.

Availability: If the teacher is developing the curriculum, the design should either require materials which can be easily obtained or allow sufficient time to acquire the special materials and supplies needed. As acquiring materials from abroad is both time consuming and often too costly to consider, the teacher should consider using local materials to replicate instructional materials they might otherwise try to order.

The level of education being taught may affect the availability resources. The primary school teacher may have fewer instructional materials to work with than the secondary school teacher. Materials are often distributed from a central storehouse to schools or to individuals responsible for local distribution. The distribution route should be understood so that materials can be located and reviewed before the instructional process begins. Many cases exist where teachers have gone through one or two years of teaching with inadequate or no texts and materials only to find that better material was available in a government storehouse - only they did not know it.

Developing a list of materials already available in country for a particular content area can provide a good start for the teacher. Making such a list, categorized according to both type and location of materials, can help the teacher to take stock of his/her resources.

ACTIVITY BOX

Take a minute and think of all the materials you might need for a given unit. Stretch your imagination to include unconventional materials (buckets, batteries - etc.

MATERIALS INVENTORY

Subject:__________________________

Item:	Type:	Description:	Source/Location:
1.			
2.			
3.			
4.			

Several types of instructional aids are traditionally associated with the classroom. Textbooks, other printed materials, radio programs, audio visual media, and human resources are all, to a greater or lesser extent, available to the creative teacher wishing to develop an interesting curriculum, spiced with variety. Each of these instructional aids has its own set of planning and use considerations for the teacher.

Textbooks

Some schools, particularly in urban areas, require students to buy texts from private suppliers who have an agreement with the education department. Teachers should be aware of which students are able to buy their own material and which are not. In certain cases, the government provides some financial support to students in need of buying their own required books and other materials. Supplies such as pencils and paper, notebooks and erasers are generally not supplied by the educational system and are purchased individually by the student in the market, if available. Many countries supplement their textbook needs, particularly in secondary education, with donated texts from European or American sources. These texts are usually donated by a school district, library or even a major publisher for various reasons (they are outdated, damaged in a warehouse fire or in shipping, or they do not meet market standards in quality). The teacher should ask library and/or administrative or ministry personnel about such supply schemes and contact suppliers directly for texts in their subject areas. For example, book distributors such as the Ranfurley Library Service in Great Britain collect withdrawn and discarded library and school books for shipment to developing countries in the British Commonwealth.

While many textbooks, originating in countries other than where they are being used, can be helpful to the teacher who is preparing a lesson or unit, he/she should be aware that they are often inappropriate or too culture bound to use as a direct guide. Science and math texts, which can often be used as direct references, are more universally useful than texts from the humanities and the liberal arts. Cultural and geographic references found in donated books from England, France or the United States are often not appropriate in the teaching context of Africa, Asia or Latin America. If the teacher chooses to use the lesson format found in these materials they will need to adapt the specific content information presented to reflect the local situation.

Instructional Media

Print media include all texts, booklets, charts, maps and newspapers. Some countries have facilities for producing limited numbers of supplemental materials. Using these facilities and understanding their limitations and requirements are important skills for teachers. Some of these skills include:

- Being familiar with what the production facility is capable of doing and what they can not do.
- Knowing how long a job might take.
- Establishing a relationship with the production personnel.
- Determining the appropriate channels through which to work.

While locally and specifically designed materials can add a great deal to the presentation of a topic, production of materials takes a long time, so plan well in advance of need.

Radio education programs play an important part in many national education systems. The teacher should become familiar with existing programs and radio broadcasting facilities in their country. Radio broadcasts can supplement language courses, and science and math programs as well as other subject areas. Cooperation with the government ministry in pilot programs using radio is a good way to become familiar with this media.

Audiovisual media, including television, photography, film (both 8 mm and 16 mm), slide/tape, filmstrips and more recently, videocassettes, are all part of the audiovisual media which may be available to some teachers. These media and materials are more likely to be available in teacher training facilities than in schools or classrooms. Nevertheless, it is important to know some of the fundamentals about how to present this type of educational media to its best advantage. These fundamentals will be covered in a later part of this section.

Human Resources

In addition to the variety of audio and visual instructional materials that the teacher can locate or make and use, many other resources in the community are available to teachers.

People from the community are one resource which are often overlooked by the teacher. Lessons which stress conversation and dialogue in language classes, for example, can be made exciting by using native speakers. Many national curricula value the use of indigenous sources of local history and culture. Locating elders and community leaders to talk about historical and cultural events could provide a meaningful and novel experience for students inside a classroom environment or as part of a research project or field trip.

Students in the class, representing objects through role playing, can be used in a variety of ways to demonstrate concepts ranging from interactions between molecules to the planets revolving around the sun in the solar system. Students also have experience and knowledge that can be shared or used to bring home a point. The more students are involved in the presentation of a lesson, the greater the chance that the information will stay with them.

Subject Specialists may be available to lecture or provide question and answer sessions on topics from chemistry and biology to vocational practices. Many government personnel in education and other areas were once teachers, perhaps highly trained in their own specialty, and may make excellent role models for students.

Producing Educational Materials

After surveying existing materials and assessing which materials are required and available for unit and lesson plans, certain instructional aids may still be needed to adequately present the content of a lesson. For these, and perhaps for all materials used in the classroom, the teacher must become a materials developer and producer. Many objects which are useful in the classroom can be made out of "found" material such as discarded bottles and cans, cloth, cardboard cartons, sticks and other such items. The next section will offer some ideas on the best ways to make use of local resources in the development of instructional aids.

Realia

Using real objects in the class, or **realia** as they are sometimes referred to, is a very effective way of aiding visual identification of leaves, minerals, parts of machinery etc. In using realia, there are several points that the teacher should consider:

- Use recognizable objects from the environment.
- Prepare the materials well in advance of presentation.
- Keep information simple and clear.

Cross-cultural considerations should be weighed before recommending and using these types of materials, however, as many objects may be used in ceremonies and carry special meaning for teachers and students. The use of bones, either real or replicas to teach biology, for example, can often cause consternation among class members due to their cultural relevance. In general, the teacher needs to be careful when using cultural artifacts not to make them meaningless or insult the students by ignoring their cultural value.

Visual Aids

Teachers may wish to use some form of visual aids which they can make themselves. As indicated above, these might take a variety of forms including tables, charts or diagrams which display a process or identify objects. The Peace Corps Resource Packet P-8 listed at the end of this section contains numerous "recipes" for the do-it-yourself production of many different types of audio/visual aids as well as other types of materials. The chart which follows provides a sampling of the types of instructional materials which can be produced, their potential for classroom application and the types of materials you need to produce them.

Choosing and Producing Instructional Materials

	TYPE	CLASSROOM APPLICATIONS	SUPPLIES NEEDED TO PRODUCE
Low Technology	1. Blackboard	Most all demonstrations and diagrams. Erasable.	Plywood and blackboard paint. Available from UNESCO. Chalk can also be produces from local resources (see referenced resource Packet P-8 at end of section).
	2. Charts, Diagrams	Permanent display such as a periodic table of the elements.	Produce from paper, white cardboard or cloth. Words can be imprinted using felt tip markers, homemade and ink or paint. Use different colors and boards and boards to rule straight lines.
	3. Real objects	Identification of parts of plants, machinery, etc.	Plant specimens, used Auto parts, objects from the environment.
	4. Flannel-graphs	Displays requiring moveable items showing action or change.	Flannel cloth or wool. Pieces made from same material or similar rough cloth that will "stick" (burlap and flannel is a good combination). Cloth may be at market or taken from old clothing. Attach to a base like stiff cardboard.
High Technology	5. Tapes for audio present-ation.	Language dialogue review and oral history.	Simple audiocassette player and recorder. Batteries or power outlet if current is available. Tapes for recording.
	6. Television, Film, VCRs	Presentation of recorded programs	Video Cassette Recorder (VCR) unit, monitor, current; Film projector; Television and broadcast program from TV studio.

Using Materials in the Classroom

Whatever subject is being taught, visual aids are most effective when they are properly used and reach the greatest number of students.

Visual Aids and Learning Styles

Based on the ideas from previous sections of the manual **Child and Adolescent Learning** and **Instructional Objectives**), one principle which should be apparent is that certain students benefit more from seeing or touching something while others need to hear an explanation before they can understand it. The best way to be sure that every student's preferred learning style is addressed is to use a **variety** of materials within any presentation. Relying too heavily on visual aids and neglecting the importance of the spoken presentation, or doing it poorly, may mean that the teacher is not reaching those students who may learn better when they hear someone present the information orally. The key here is to mix the presentation with different types of materials if possible. Use real objects to teach classification, visual aids like charts and diagrams to teach about processes, and technological media, if available, to teach processes involving action or subjects where dramatization is appropriate. Combine different sections of the course content and use various materials to teach these sections alternating between the use of media and materials and a regular, oral presentation (see **Classroom Teaching Techniques** for more detail on presentation techniques).

Presenting an Instructional Aid to a Class

Certain steps are involved in the presentation of any instructional materials. These steps can be categorized according to when, in relation to the presentation, they should occur.

Before the Presentation

- Make sure that the materials relate directly to the **objectives** stated in your lesson plan.
- If some form of technological media is used, the teacher is well advised to check the equipment and make sure everything is in working order before the class begins.

During the Presentation

- The pacing of the presentation is important. The focus of attention should be shifted clearly towards a visual aid during a presentation. Begin with a phrase like, "Now, looking at this diagram, we can see that some types of plants..." .

- As in speaking to a class, the teacher should move slowly and clearly from one part of a visual to another, physically pointing out each figure or object in the visual aid.

- In using instructional media the teacher should
  a) minimize the distraction during a presentation and
  b) maximize the students' attention on the media being presented.
  (e.g. Some teachers, before a filmstrip presentation or lecture, tell the class that there will be a quiz following the presentation).

- Lessons using media should always be preceded by an introduction from the teacher. Films, audio tapes and other media provide much information and some form of instruction by the teacher should be given to offer some indication as to what students should look for.

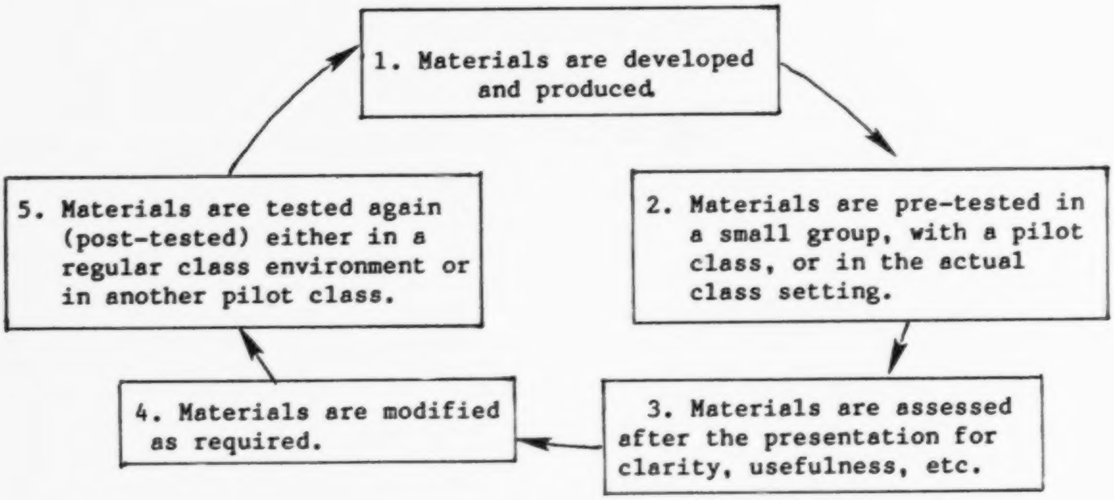
- Provide some sort of summary or review of the material to give closure to the lesson (e.g. Study questions be used after the presentation to help students review important points).

After the Presentation

- Make sure that the instructional aid is safely stored so that it is ready for its next use.

Evaluating Instructional Materials

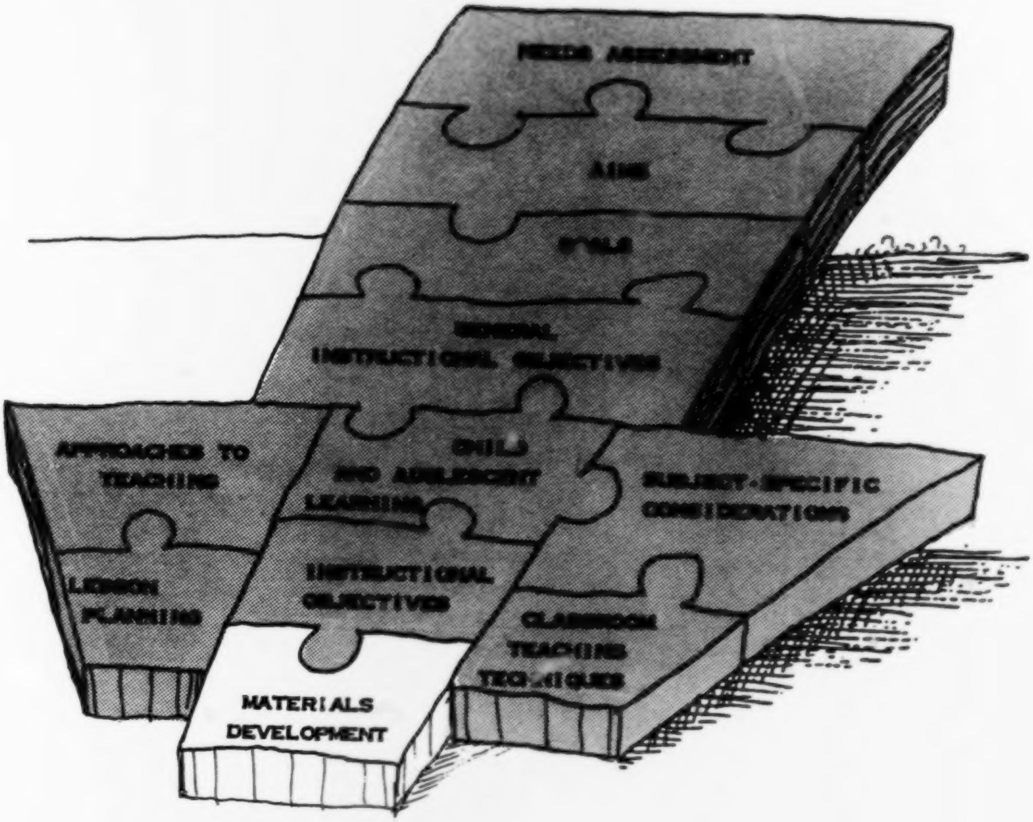
When materials have been used as part of the instructional process, the materials themselves should be assessed for their relevancy, practicality and usefulness in the lesson or unit. If materials are developed by the teacher or are used for the first time in a classroom, then the teacher is responsible for determining how effective they are and changing them appropriately before they are used again. One such model used in the materials development field is the **pretest - modification - post test** model. In this model, materials development falls in a cycle of production:



1. Materials are developed and produced.
2. Materials are pre-tested in a small group, with a pilot class, or in the actual class setting.
3. Materials are assessed after the presentation for clarity, usefulness, etc.
4. Materials are modified as required.
5. Materials are tested again (post-tested) either in a regular class environment or in another pilot class.

ACTIVITY BOX

1. Take a single lesson and devise two different types of teaching aids for it. (e.g. a visual display and recorded mini-lecture using realia).
2. Devise a simple pre-test for one of your materials from #1 above. Try out the material with a class or group of trainees and evaluate its effectiveness afterwards. Make appropriate modifications.


NEEDS ASSESSMENT
AIMS
GOALS
GENERAL INSTRUCTIONAL OBJECTIVES
APPROACHES TO TEACHING
CHILD AND ADOLESCENT LEARNING
SUBJECT-SPECIFIC CONSIDERATIONS
LESSON PLANNING
INSTRUCTIONAL OBJECTIVES
CLASSROOM TEACHING TECHNIQUES
MATERIALS DEVELOPMENT

References:

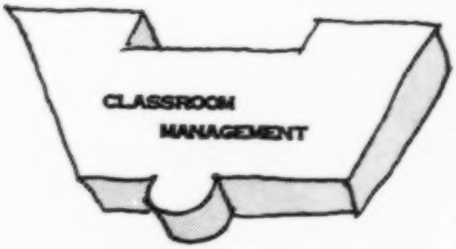
Resource Packet P-8 Audio-Visual/ Communications Teaching Aids, Peace Corps, Information Collection and Exchange (ICE). This packet contains many useful ideas on the production of visual and other types of teaching and training aids for use in developing countries. Among the materials in this packet are:

Audiovisual Communication Handbook, Indiana University. This book provides a great deal of information about the production, use and evaluation of audio and visual aids in education. It has a low-tech approach which is suited to the needs of many teachers in Third World countries faced with modest material supplies.

The Multiplier Handbook, USAID. This book emphasizes handmade materials both for reproduction and for one-time use in the classroom.

CLASSROOM MANAGEMENT

CLASSROOM MANAGEMENT



One of the most important skills that a teacher can bring to the classroom is effective classroom management. Most experienced teachers will agree that a large part of their teaching time is spent maintaining a classroom environment conducive to learning. Many issues which affect management and discipline problems extend beyond the boundaries of nations and into any classroom setting. Still others are totally dependent on the cultural context and the specific situations of individual students. Teachers need to recognize that issues of class size, classroom facilities and the teacher's own behavior and attitudes are not the only variables at play. Work responsibilities at home, malnutrition, lack of sleep, distance traveled to and from school, traditional view of a teacher's role, and personal motivation towards attendance can all affect the student's performance academically and behaviorally.

The key to effective classroom management lies in the realization that students come from different backgrounds and attend school for different reasons. Nevertheless, the teacher must find a way to balance the needs and desires of individual students with the well-being of the group as a whole. It is also important to realize that students have become used to certain methods of instruction and that quick changes from these methods although pedagogically sound in our culture, may fail miserably in another. Teachers should observe traditional disciplinary techniques used in both the home and school and consider what role these accepted techniques have in your personal classroom management style. Continued dialogue with parents, school officials, other teachers, students and community members will give you the insight that is needed to adapt and maintain successful and culturally appropriate management of your classroom.

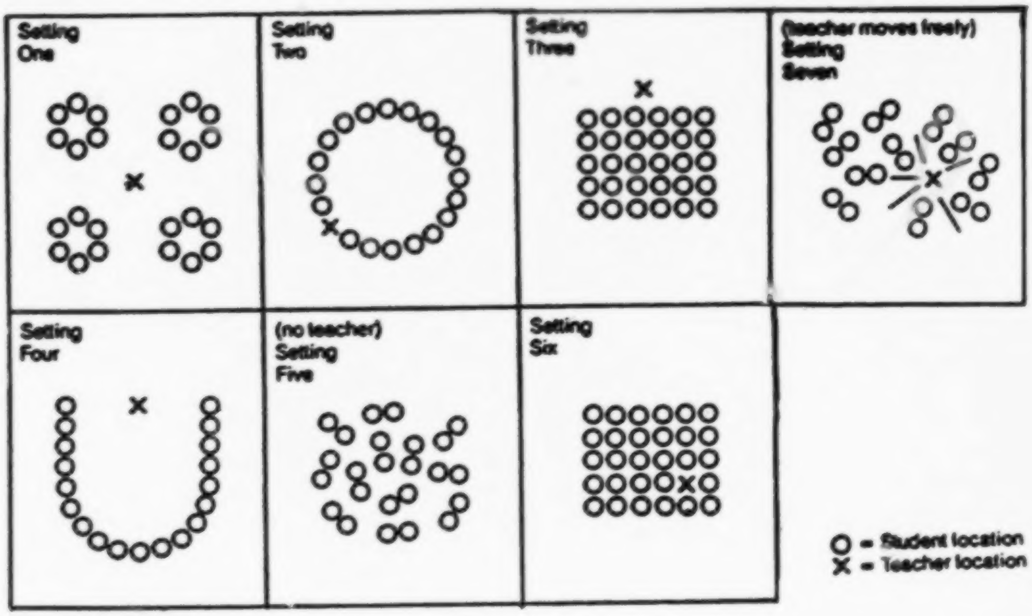
This section will address a variety of issues that influence classroom management. They include:

- Physical Aspects of the Classroom
- Curriculum Design Considerations
- Expectations and Limits
- Support Systems
- Teacher Attitude
- Teaching Routines
- Teacher on Stage
- Addressing Individual Needs
- Handling Discipline Problems
- Using the Least Amount of Necessary Discipline

To one degree or another, all of these issues can be associated with discipline. It should be remembered that how well a teacher manages the classroom directly influences the behavior of the students and the amount of discipline necessary to maintain order.

The Physical Aspects of the Classroom

The room should be as comfortable and as conducive to learning as possible. Variety in seating arrangements as shown below can change the atmosphere of the entire classroom in one easy step. You should experiment with different arrangements to meet your needs and resources.



Many teachers will be working in classrooms with row benches and desks. Creative seating arrangements will be difficult in this situation but the teacher may have the option of taking the students outside and conducting the class under a tree with the aid of a portable blackboard. Conducting classes outdoors may also be used by the teacher as a reward to reinforce good behavior as most students will enjoy the chance to get out. In utilizing this strategy, however, the teacher should be aware of distractions that may cause students' attention to wander.

Charts, maps, globes and other displays made from local resources give the room and educational feeling which can be very useful in determining the mood. Having students display their work is a good way of recognizing the student efforts and can add not only to the student's self esteem but also to the educational atmosphere. Many learning activities can be designed around student created displays and bulletin boards. If bulletin boards do not exist, a piece of cardboard or cork can serve as a display board (see **Materials Development and Resource Utilization**).

The room should be well organized and allow for a free flow of student traffic. Teachers may want to experiment with the seating chart arrangement for students. If two or more disruptive students are sitting together in the same row, the teacher should separate them. Having a fixed seating chart helps in the beginning to learn the names of the students but to stay with the same seating chart throughout the year may lead to stagnation or disruptive behavior. Arrange your room to enhance classroom learning and to avoid disruption.

Curriculum Design Considerations

In instances where the government determines course content, teachers may feel that they have little control over their subject area. What they should realize is that they do have control over how that content is designed and presented (see sections on **Writing Objectives, Lesson Planning, Classroom Teaching Techniques**, and **Material Development and Resource Utilization** for more information in these areas). If improper objectives, learning activities and materials are selected, students can become bored, apathetic, fatigued and frustrated - all potentially leading to misbehavior. Teachers should plan for activities that are interesting and enjoyable but which, at the same time, deal with the basic curriculum that needs to be covered. Activities should provide a challenge for all students but also remain in the reach of students. Lessons should be varied and, if possible, integrated other aspects of the student's life. The teacher will find that if the lesson can actively hold the attention and interest of the student, misbehavior and disruptions will be the rare exception and not the frequent rule.

Expectations and Limits

Every teacher needs to decide what is and is not acceptable behavior. Ranges of acceptable behavior must be determined for noise, movement, talk, self-control, getting to work, completion of tasks and good manners. Discussions with other local teachers can help the teacher to decide these limits since codes of conduct vary among cultures, within cultures and from school to school. Rules must be seen to be fair and culturally appropriate. Teachers may want to allow student input when creating these rules. They should avoid establishing too many rules, however, as more time can be spent keeping to the rules than on academic tasks.

Before rules are enforced, the following steps should be taken:

- Each rule should be explained to the students clearly and reasons must be given that show how these rules contribute to classroom learning.
- Rules should be posted in the front of the class to help the students focus on the teacher's expectations and to be used for periodic reference.
- Rules should be stated positively to avoid a negative challenge for the students. (e.g. rather than saying, "No cheating during tests!" teachers should focus on the positive and state the rule as, "Students will be expected to do their own work during tests.")
- All rules that are created must have a system of positive as well as negative consequences. Rules and consequences should be explained to the students on the first day of classes. If students follow the rules, the reward system will reinforce good behavior. Negative consequences for breaking the rules must be humane and culturally appropriate but must be something that the students do not like or want. (Humiliation should be avoided and all attempts should be made to protect the dignity of the students regardless of their behavior).

Students should understand that they make the choice between good or bad behavior. It is the role of the teacher to help students make good choices and provide students with alternatives to bad choices, bad behavior and thus bad consequences.

One of the most important points that must be kept in mind: BE CONSISTENT! Always confront misbehavior and do not let violations go unnoticed or unenforced or the students will soon see the discrepancies in your system of discipline. In the same light, reinforce good behavior and show students you are there to help them achieve good consequences. When confronting misbehavior, do not dwell on the incident which causes a break in teaching and learning, which should be the primary focus of all class activities.

Support Systems

Teachers should identify and establish a support system for their chosen management system that extends from the school through the community. This support system should consist of other teachers, the principal and parents. It is important that the teacher has the support of the principal to follow through on discipline problems that are beyond the time and means of the teacher. The teacher should explain his/her rules to the principal as soon possible and approach other teachers for help and support in implementing his/her management system.

When possible, the teacher should establish communication channels with the parents. Several methods can be used to keep in touch with parents and begin to create a reserve support system for your management practices:

- Use newsletters and notes (Be aware of whether the parents are literate or not before sending notes home);
- Set up parent/teacher conferences at regular intervals to discuss the student's progress;
- Informal meetings are useful ways to get to know the parents and for the parents to get to know you.

Gaining the respect of the parents and letting them know that he/she is sincerely interested in the progress of their children may provide the teacher with one of the most important and useful support systems of all. (The teacher should not feel discouraged if he/she cannot make these contacts with parents. In many cultures the teacher is viewed as the person best qualified to handle decisions concerning the educational development of the student and consultation with the parents is not the norm.)

Teacher Attitude

Teachers should assert their rights to teach, to discipline and to ensure student learning. Students should understand from the teacher's attitude that the teacher will not let anything interfere with his/her right to teach and the students' right to learn.

Teachers should also realize that they act as a role model for many students. You should be the best example possible for the students to follow. Act and speak in ways that you want your students to act and speak. You may want to make a checklist as to what these are so that the list can serve as a constant reminder.

Students are sensitive as to whether the teacher enjoys teaching. Be as positive as possible and be aware of how your attitude affects the students.

Teaching Routines

This refers to the routines of teaching and the delivery of lessons. As mentioned before, routines are important in clarifying for the students what is expected of them. Teachers should clearly explain the routines for entering and exiting the room, sharpening pencils, obtaining and replacing materials, and leaving for the toilet.

The teacher should be organized and well prepared for all lessons. Lesson plans that are carefully thought about well before the lessons begins allow the teacher to focus on other aspects of classroom management and are generally well received by students.

Teacher on Stage

In many ways, the teacher has a great deal to learn from the actor on the stage. The mannerisms and speech the teacher uses while conducting the lesson are very similar to those used in presenting dramatic productions. The following are some key rules to keep in mind when 'presenting' your lessons:

- Speak clearly and face the students when speaking to them.
- Learn to use the blackboard effectively and if you need to write many notes on the board, periodically turn and break from the note-taking to address the students.
- Focus on all the students in the class. Eye contact is very important and should not be reserved for only a few students.
- Be aware of all students in the room and learn to scan over the class as you talk.
- Use gestures and voice control (these are an effective means of attracting and holding students' attention).

In general, dramatic techniques can add excitement to a lesson but it is not necessary to become a stand-up comic to get your point across. A joke, if it is appropriate to the lesson and the culture, can encourage laughter and excitement and help students enter into the spirit of learning. In general, however, entertainment techniques should be used only when they are effective in driving home a point, changing the atmosphere of the classroom and, ultimately, helping the students learn.

Teachers should also be aware of certain gestures that may be culturally offensive or misunderstood. Dress and appearance are also important and teachers should be aware of the local standards expected of teachers.

Addressing Individual Needs

The main objective of most students is to be accepted, feel wanted, and feel that they are part of the class. Teachers should concentrate on giving all students in the class regular attention. This may be hard to do in large classes but every effort to communicate with the students should be made. Some students are coming from very large families or families with missing parents. School offers them their only real opportunity to be recognized and addressed as an individual. Interaction with students on a personal level is important and can greatly enhance conditions for classroom management and the maintenance of a successful learning environment.

Teachers should find ways to help students individually or in pairs, if this is more culturally accepted. Conferences can be conducted during the class while other students are working individually or in groups. Some teachers maintain a checklist of short but effective individual conferences and in this way can check to see if they have been showing personal attention to every student.

Signals can be sent to students in a very private way. The teacher can:

- Catch the eye of a student while lecturing and hold eye contact for a moment.
- Smile or show positive gestures (such as a nod of the head) to reinforce correct behavior or answers.
- Stand near the student, if culturally appropriate, to show your concern. Proximity can be an important mechanism to express both positive and negative concern; a light touch on the shoulder might indicate praise for a job well done while a heavier touch might show concern.

It must be mentioned though that praise can be overdone and if students hear the same words of praise constantly, this very important aspect of teaching behavior loses its effectiveness. Practice both verbal and nonverbal ways of praise and use different terms to reinforce good behavior or effort.

Handling Discipline Problems

This section has taken the stance that most discipline problems can be forestalled if early classroom management practices are established. Even in the best managed classroom, however, discipline problems arise and the teacher needs a strategy to deal with these. The following list outlines key points a teacher should keep in mind when handling discipline problems in the class.

General Strategies

- Do not try to teach through classroom disruptions. Stop the class and have students remain quiet for a few seconds to calm down and then move on to the lesson.
- Do not lose control of the situation by raising your voice and yelling at your students. Use a calm and controlled voice when addressing the problem.
- Do not let the situation get out of hand by overlooking small discipline problems such as unnecessary chatter or throwing pencils around the room. Set your standards of classroom behavior and stick to them.
- Do not get tough and insulting. Remain calm and at all times maintain a professional manner.
- Do not keep all discipline problems to yourself. Keep your headmaster informed about serious problems.

Strategies for dealing with troublemakers

- Do not let troublemakers sit together. Students should understand that sitting next to their friends is a privilege that must be earned.
- Do not spend too much class time addressing persistent troublemakers. If the problem can not be solved in a reasonable amount of time, ask the student to leave the classroom and move on with the lesson.
- Address the persistent troublemakers outside of class. When certain students continue to act up in class a conference after class or after school can help to identify the problem. Also remember to reinforce their good behavior and give these students positive attention during the class as well as giving them the opportunity to participate in the class in a positive manner.

Using the Least Amount of Necessary Discipline

Teachers should stick to the principle of using the least amount of discipline necessary to maintain a positive learning environment. Discipline techniques are important to protect teaching and learning rights but should not be instituted as an end in themselves. Avoid overkill and use only the amount of discipline that is necessary for an effective classroom. For some classes, the amount and type of discipline will be light; for others, it will be heavy. It is important for the teacher to find the right balance for their particular class.

Again, it is important to realize that most classroom problems can be avoided by efficient classroom management. Teachers should observe classes in the school before teaching if possible to get a better understanding of the traditional ways of discipline in order to find the right balance of the discipline they feel comfortable with and the expectations the students have of a teacher in that society.

Summary

Classroom management is described above in the most general terms, and specific implementation strategies must be developed according to personal style, cultural norms, and situations. There is no one formula, as for many things in teaching, that can be applied across the board to produce an effective management style. Forced to work in a traditional classroom setting, a variety of creative techniques and individual attention could make both teacher and student forget where they are. The parents of student in your class may live on the other side of the country, but your attitude, approach to discipline and attention to individual needs may make the students feel at home with you in the classroom. The main point to remember is that you look around, try things out, make some decisions, inform the people that it most directly affects, and be consistent and fair in implementing your decisions.

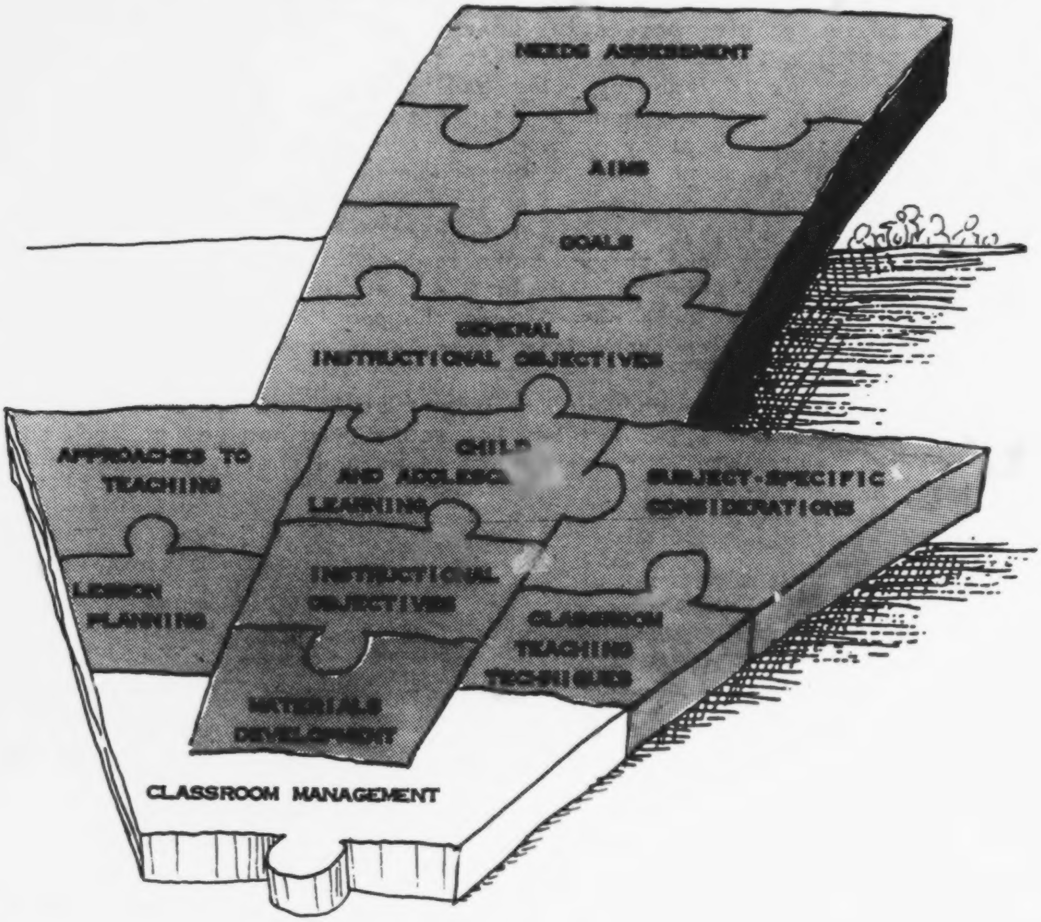
The sooner you decide on your management style and let the students know what it is and will always be, the sooner you can get on with the real task at hand: helping the students to expand their abilities, knowledge and potential.

ACTIVITY BOX

1. Think of the most effective teacher in your school. How does that person discipline? What is the atmosphere in the classroom?

2. Think of the least effective teacher in your school. How does that person discipline? What is the atmosphere of the classroom?

3. Create a list of rules for classroom behavior with which you would feel most comfortable. Discuss that list with a teacher whose classroom management style you respect and who knows the cultural norms. Redesign your list based on that conversation and consider how you would present/negotiate it with your students.



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ASSESSMENT OF STUDENT LEARNING

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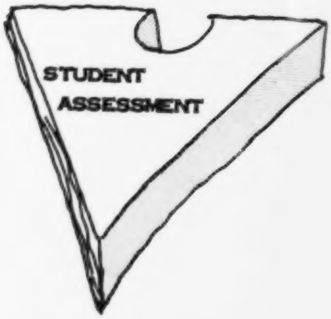


Student learning is a result of numerous factors -- an appropriate and meaningful curriculum, availability of materials, a supportive administration, a favorable classroom atmosphere, student willingness and ability to learn, and teacher effectiveness, to name only a few. The extent to which these exist influences the relative level of success in the learning process. Because success is always relative, it is important to assess levels of success attained. As a diagnostic tool, assessment of student learning can serve to determine the initial abilities (and thus the needs) of both the individual student and the class as a whole. As an evaluative tool, student assessment can provide the teacher and school administration with an ongoing and final profile of student learning as well as teacher effectiveness at each point in the process. Thus, assessment of student learning is a vital diagnostic and evaluative tool for determining content and procedure in both lesson planning and test writing.

This section will present various types of student assessment including specific information on testing. Suggestions will be given for test construction, administration and scoring. Finally, evaluation of measuring instruments will be discussed as a tool to test the validity and effectiveness of student assessment methods.

Assessment Techniques

Numerous assessment techniques can be used for the purposes of both evaluating and grading student learning:

1. OBSERVATION. Though the teacher naturally observes his/her students regularly, observation can be a useful assessment tool if it is systematized:

   - by taking notes on who answers which questions, how many people answer them, etc.;
   - by giving grades for student participation;
   - by observing other people's classes (see Chapter 3, **Collaboration**).

   (for more detail on Observation Techniques, see the section on **Supervision** in Chapter 1)

2. DIALOGUE/CREATIVE QUESTIONING. Through dialogue and creative questioning, the teacher can "get a reading" on what the students understand, what material is more difficult, where the lesson is unclear, etc. (See Questioning Skills in the **Classroom Teaching Techniques** section).

3. HOMEWORK. The teacher can assign points to written homework assignments, thus getting immediate feedback on student learning as well as additional material for grades.

4. CLASS PROJECTS. When class size permits, students can work in small groups on any task the teacher deems appropriate. This can be followed by a presentation given by students to the rest of the class. Students can be assessed on skills they demonstrate during the course of the project such as library, research, writing, and presentation skills. Students can even construct, administer and grade quizzes on their sections with the guidance of the teacher.

5. OUTSIDE PROJECTS/EXTRACURRICULAR ACTIVITIES. Because many courses can be augmented by such activities as field trips, group projects outside of class, independent study, etc., these activities can be assigned and then evaluated.

6. TESTING (FORMAL ASSESSMENT). Written assessment of student learning ranges from short quizzes to end of term examinations. (Testing is described in detail in the remainder of this section.)

Choosing an Assessment Technique

Learning conditions in many countries preclude the usefulness or even practicality of certain assessment activities. Overcrowded classrooms, lack of materials, and general attitudes about traditional teaching and testing present nearly insurmountable obstacles to innovation. The tendency is for the teacher to revert to testing as the primary or sole assessment strategy. But for all the arguments commonly given in support of testing, as many could be made in opposition. In recent years, educational theorists have observed that testing creates a competitive atmosphere which can adversely affect the learning process; testing is more often used to order and sort (i.e., selecting and eliminating) than to evaluate. To the extent that assessment of student learning should first evaluate and then order, other assessment techniques can prove to be more desirable. Keep in mind, however, that most educational systems are examination driven. The fact that examinations determine advancement from one level to the next as well as the final overall assessment of a student's academic performance may actually mean that the teacher has greater freedom in the use of alternate assessment techniques within his/her classes. Since individual class grades often do not serve as the primary record of individual achievement, the school administration may not pay attention to how the teacher determines grades in a given semester. Never-the-less, it is important to be aware of the fact that forms of student assessment other than testing might meet with initial resistance from the school administrations and/or fellow teachers.

Whether a teacher decides to use tests or other assessment techniques, objective criteria should be established to evaluate student performance. This is especially true with non-written forms of assessment. If, for example, the teacher decides to give grades for oral participation, what objective criteria are to be used in distinguishing a good response from a fair one? Great care must be taken to be sure that grades are given on the basis of objective criteria, not just personal preferences or personalities (see **Instructional Objectives**).

Perhaps the best strategy is to use a variety of written and non-written assessment techniques which assess a wide range of learning styles (see **Child and Adolescent Learning**) as well as the desired content area. In general, the more techniques utilized by a teacher, the more varied, interesting, and effective his/her teaching and testing will be.

ACTIVITY BOX

1. Choose one of the assessment techniques above and make a list of five criteria by which you will evaluate your students' performance.
2. Why are certain techniques of assessment more accepted than others? What problems might you encounter in trying to use them?

Testing

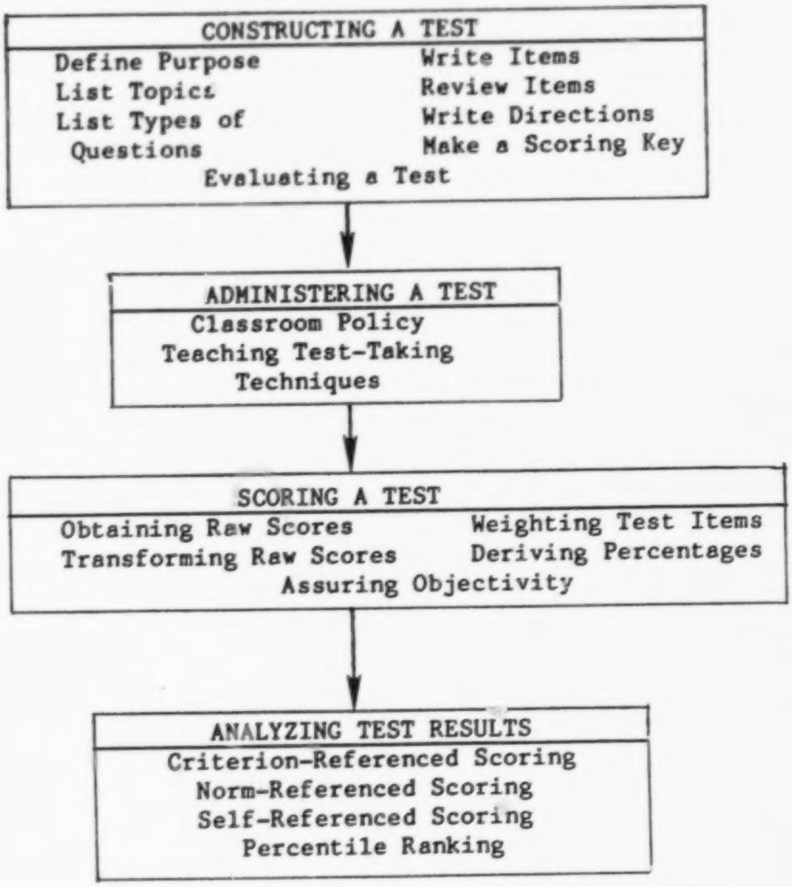
The traditional approach to assessment of student learning is formal testing. Still the most widely used of all methods of assessment, testing has been the center of discussion and debate among educators for years. The topic of testing includes a large body information, some of which will be discussed in the upcoming section. Basically, testing consists of four primary steps: test construction, test administration, scoring and analyzing the test. Each of these steps can result in a variety of test forms and elicit a variety of useful outcomes, such as:

- Ideas for lesson plans
- Knowledge of individual students

- Ideas for approaching different students/classes
- Scores for admission
- Indication of teacher effectiveness

The following is a schematic of the steps in testing that will be covered in the rest of this section.

Steps in the Planning and Evaluation of Tests



CONSTRUCTING A TEST

There are eight basic steps in constructing a test:

1. **Defining the purpose.** Before considering content and procedure, the teacher must first determine who is taking the test, why the test is being taken, and how the scores will be used. Furthermore, the

teacher should have a rationale for giving a test at a particular point in the course: Does the test cover a particular part of the unit content? Or should material currently being studied be saved and tested at a later time when the entire section is completed?

2. **Listing the topics.** Once the purpose and parameters have been established, specific topics are listed and examined for their relative importance in the section. This is called representative sampling. For example, if the study of crustaceans comprised approximately 10% of all class work in the section to be tested (including class time, homework, and other assignments), then that topic should comprise approximately 10% of the test. This can be done either by calculating the number of questions per topic or by weighting different sections to match class coverage (see 7. Making a Scoring Key below).

3. **Listing types of questions.** Different types of material calls for different types of test questions. While multiple choice questions might adequately test a student's knowledge of mathematics, essays reveal more about a student's understanding of literature or philosophy. Thus, in deciding what types of test questions to use (short answer, essay, true/false, matching, multiple choice, etc.) the following advantages and disadvantages should be kept in mind:

Type	Advantages	Disadvantages
Short Answer	Can test many facts in short time. Fairly easy to score. Excellent format for math. Tests recall.	Difficult to measure complex learning. Often ambiguous.
Essay	Can test complex learning. Can evaluate thinking process and creativity.	Difficult to score objectively. Uses a great deal of testing time. Subjective.
True/False	Test the most facts in shortest time. Easy to score. Tests recognition.Objective.	Difficult to measure complex learning. Difficult to write reliable items. Subject to guessing.
Matching	Excellent for testing associations and recognition of facts. Although terse, can test complex learning (especially concepts). Objective.	Difficult to write good items. Subject to process of elimination.
Multiple Choice	Can evaluate learning at all levels of complexity. Can be highly reliable, objective. Tests fairly large knowledge base in short time. Easy to score.	Difficult to write. Somewhat subject to guessing.

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In choosing types of questions to be used on a test, it is also important to consider the following points:

- Classroom conditions can automatically eliminate certain types of questions. Since answers to multiple choice questions can be easily copied in an overcrowded classroom, they might not be an accurate measure of student learning. Likewise, if blackboards are the only media available for presenting the test, long questions and textual references might be impossible to include on the test.

- Considerations regarding administration and scoring often dictate the type of questions to be included on a test. Numbers of students, time constraints, and other factors might necessitate the use of questions which can be administered and scored quickly and easily.

- The types of knowledge being tested should be considered in the assessment process. A simplified checklist could be used by the teacher to determine if students have been assessed in all relevant areas. This could take the form of a graph such as the one which follows:

TOPICS TO BE TESTED	FACTS	SKILLS	CONCEPTS	APPLICATION
Verbs: Conjugation of "to be"	x			
Pronunciation: Short "a"		x		
Use of Modals: Should, Must, Ought to			x	
Free Expression				x

4. **Writing items.** Once purpose, topics and types of questions have been determined, the teacher is ready to begin writing the specific parts, or items, of the test. Initially, more items should be written than will be included on the test. When writing items, the following guidelines are followed:

   - Cover important material. No item should be included on a test unless it covers a fact, concept, skill or applied principle that is relevant to the information covered in class (see 3. Listing Types of Questions above).

   - Items should be independent. The answer to one item should not be found in another item; correctly answering one item should not be dependent on correctly answering a previous item. (This guideline might not apply in some cases. For example, a math test might begin by testing simple skills and then test their integration. In all cases, the teacher should be aware of what is being tested at each level and use this strategy sparingly).

- Write simply and clearly. Use only terms and examples students will understand and eliminate all nonfunctional words.

- Be sure students know how to respond. The item should define the task clearly enough that students who understand the material will know what type of answer is required and how to record their answers. For example, on essay questions, the teacher may specify the length and scope of the answer required.

- Include questions of varying difficulty. Tests should include at least one question that all students can answer and one that few, if any, can answer. Tests should be designed to go from the easiest to most difficult items so as not to immediately discourage the weaker students. (read **Cross Cultural Considerations** on page 148.)

- Be flexible. No one type of item is best for all situations or all types of material. Whenever feasible, any test should contain several types of items.

5. **Reviewing items.** Regardless of how skilled the teacher is, not all his/her first efforts will be perfect or even acceptable. It is therefore important to review all items, revising the good and eliminating the bad. Finally, all items should be evaluated in terms of purpose, standardization, validity, practicality, efficiency, and fairness (see 8. Evaluating a Test below).

6. **Writing directions.** Clear and concise directions should be written for each section. Whenever possible, an example of a correctly answered test item should be provided as a model. If there is any question as to the clarity of the directions, the teacher should "try them out" on someone else before giving the exam.

7. **Devising a scoring key.** While the test items are fresh in his/her mind, the teacher should make a scoring key -- a list of correct responses, acceptable variations, and weights assigned to each response (see **Scoring** below). In order to assure representative sampling, all items should be assigned values at this time. For example, if "factoring" comprised 50% of class material to be tested and only 25% of the total number of test questions, each question should be assigned double value.

8. **Evaluating A Test.** All methods of assessing student learning should achieve the same thing: the clear, consistent and systematic measurement of a behavior or something that is learned. Once a test has been constructed, it should be reviewed to ensure that it meets

six specific criteria: clarity, consistency, validity, practicality, efficiency, and fairness. The following is a checklist of questions that should be asked after the test (or any assessment activity) has been prepared and before it is administered:

A CLEARLY DEFINED PURPOSE	___	Who is being assessed?
	___	What material is the test (or activity) measuring?
	___	What kinds of knowledge or skills is the test (or activity) measuring?
	___	Do the tasks or test items relate to the objectives?
STANDARDIZATION OF CONTENT	___	Are content, administration, and scoring consistent in all groups?
VALIDITY	___	Is this test (or activity) a representative sampling of the material presented in this section?
	___	Does this test (or activity) faithfully reflect the level of difficulty of material covered in the class?
PRACTICALITY AND EFFICIENCY	___	Will the students have enough time to finish the test (or activity)?
	___	Are there sufficient materials available to present the test or complete the activity effectively?
	___	What problems might arise due to structural or material difficulties or shortages?
FAIRNESS	___	Did the teacher adequately prepare students for this activity/test?
	___	Were they given advance notice?
	___	Did they understand the testing procedure?
	___	How will the scores affect the students' lives?

ACTIVITY BOX

1. Make a statement of fact. Now write it as a test item in the form of multiple choice, matching, true/false, and short answer. If you were to include this item on a test, which format would you choose?

2. Write directions for the format you chose in activity one and read them to someone else. Are they clear? Concise? Understandable?

3. Take a test that you have designed. Before you administer it use the checklist above to evaluate it.

ADMINISTERING A TEST

Once the items, directions, and answer key have been written, the teacher should consider the manner in which the test will be presented in advance. Factors such as duplication, visual aids, and use of the blackboard should be considered in advance to insure clarity in presentation as well as to avoid technical difficulties.

Establish Classroom Policy

Because discipline is a major factor in test administration, the teacher must establish a classroom policy concerning such matters as tardiness, absences, make-ups, leaving the room, and cheating (see **Classroom Management**). The teacher must also advise students of procedural rules such as:

- What to do if they have any questions.
- What to do when they are finished taking the test.
- What to do if they run out of paper, need a new pen, etc.
- What to do if they run out of time.

The teacher should always be aware of the effect of testing conditions on testing outcomes. Physical shortcomings should be alleviated wherever possible. If some students cannot see the blackboard, they should be allowed to move to a better location. If students are cramped into benches, more benches should be brought in and students should be spread out. If this is not possible, two separate tests can be written and distributed to students on an alternating basis.

Similarly, psychological conditions can inhibit optimal performance. Such factors as motivation, test anxiety, temporary states (everyone has a bad day once in a while), and long-term changes can profoundly effect the test-taker and therefore his/her performance on the test. It is therefore the teacher's responsibility to establish an official, yet not oppressive, atmosphere in the testing room to maximize student performance.

Teaching Test-Taking Techniques

Perhaps the greatest psychological impediment most test-takers face is a lack of knowledge about test-taking techniques. Students often fail tests not because they do not know the material but because they do not understand the procedures and techniques for successful test-taking. If a test is to be as fair as possible, students must understand both test-taking procedures and techniques. This means that the teacher should familiarize his/her students with:

- The type of test to be given (e.g. diagnostic, proficiency, achievement, etc.) and how to study for it.
- The types of items which will appear on the test and how to respond to them (e.g. matching, fill in the blank, essay questions, etc.).
- The types of directions commonly accompanying certain types of test items.
- Strategies for successful test-taking (e.g. time management, the process of elimination, guessing, etc.).

These skills can be taught using practice quizzes or tests that students can grade for each other, homework assignments that take the form of a test or using other informal, non-threatening situations for students to try their newly acquired test-taking skills. The importance of teaching test-taking skills cannot be overemphasized -- TESTING METHODOLOGIES ARE CULTURE-SPECIFIC AND THEREFORE MUST BE **LEARNED.**

ACTIVITY BOX

1. Think of a test you took as a student on which you did very well. What factors contributed to your successful performance (classroom conditions, nature of the test, personal interest in subject matter, etc.)?
2. Think of a test you took as a student on which you did very poorly. Can you remember why?
3. Construct a quiz consisting of five multiple choice questions. How would you explain this method of testing to a class which has never seen it before?

SCORING A TEST

In order to determine how well a student performed on a test or in an activity, specific value must assigned to each test item or activity component. Then, raw scores must be derived and, if necessary, transformed to fit the requirements of testing within specific contexts.

Obtaining Raw Scores

The first step in determining how well a student performed on a test or in an activity is to derive a raw score, or number of items answered correctly. Hence, if a student answers eight out of ten items correctly, his/her raw score is eight.

Transforming Raw Scores

Unlike grading in the U.S. or in countries following the British model, where grades are determined based on 100 points, grading in countries following the French model is based on a system of 20 points. In order to make tests match such a predetermined number, raw scores must be transformed into fractions, decimals, or multiples of their raw value. For example, say the desired result is a score over 20, but a test includes 30 questions. If all questions are of equal importance and difficulty, they can be considered as fractions (2/3 pt. each) or as decimals (.66 each). Likewise, if a test has only 10 questions, each can be multiplied by two to obtain a score over 20.

Cross-Cultural Considerations

In general, grading is much harsher in many countries than in the United States. Students rarely, if ever, achieve perfect or even near perfect scores on tests or as a final grade. In countries following the British model, a passing grade is 50/100 or better, in the French model, 10/20 or better. It is therefore, inappropriate, for example, to give even the best students a grade higher than 80% (British) or 16/20 (French). In fact, your school administration, fellow teachers, and students will be bewildered and even angry if you deviate from this strict rule. Remember: 50% or 10/20 reflects an adequate performance, equivalent to the U.S. 70% or C. It is, therefore, important when designing a test that you include items of sufficient difficulty to reflect this grading tradition.

Weighting Test Items

In the event that some questions are more important or more difficult than others, they can be weighted; that is, some questions can be considered of double value (in the example above, 1 point each) and others of less value (1/4 point, or .25). In other words, as long as the total value for the test equals the predetermined number required, individual item values can be juggled as the teacher sees fit (see table on coefficients under Norm-Referenced Scoring below).

Deriving Percentages

By transforming raw scores into percentages, the teacher can compare tests of varying length and difficulty or tests of varying amounts of points on equal terms.

If all items on a test are worth the same amount, the percentage correct can be determined by dividing the number of correct items by the total number of items, then multiplying by 100%:

$$\text{Percent correct} = \frac{\text{Number of items correct}}{\text{Total number of items}} \times 100\%$$

If the items are of different weight, the percentage correct can be determined by dividing the number of points earned by the maximum number of points, then multiplying by 100%:

$$\text{Percent correct} = \frac{\text{Points earned}}{\text{Maximum number of points}} \times 100\%$$

Assuring Objectivity

As with test construction, the key to successful test scoring is objectivity. By setting certain standards and prescribing certain rules, the teacher can be sure that scoring has been objective and students have been treated fairly. Three techniques are particularly helpful in assuring objectivity:

- immediate scoring & recording
- using a scoring key
- having a procedure for comparing responses to the key

Perhaps it seems self-evident, but immediate scoring and recording of scores can do much to alleviate misunderstanding and bias. The more time that goes by between test-taking and scoring, the greater the chances of forgetting relevant information or losing papers altogether. More importantly, the sooner the students get their tests back, the more meaningful their performance on the test. It does little good to return a test months after it has been taken when students have to review the material tested just to remember why they answered the way they did.

Using a scoring key can make scoring papers go quickly while reducing the possibility of error and bias. It can also simplify and standardize the process of scoring if numerous people will be scoring the test. Having a procedure for comparing responses to the key can also speed up the scoring process and increase objectivity. For example, the teacher can:

- Scan several papers before starting scoring to get a baseline view of the type and level of responses.
- Grade a sample of papers twice to see if he/she is, in fact, grading consistently.
- Score papers anonymously so as not to be influenced by students' performance in other aspects of the course (this can be done by assigning numbers before hand, folding the tops of test papers back, etc.).
- Grade items one at a time -- that is, first grade all answers to item 1, then all responses to item 2, and so on (this techniques is particularly useful with essay tests where it is important to look for key points in each response).

ANALYSING TEST RESULTS

Once test papers have been scored, they can then be analyzed in numerous ways to provide the teacher with information about student performance. For example, a student's tests from one semester can be ranked to show relative areas of strength and weakness; averaged class scores on a given test can be ranked to compare one class's performance to that of another. Such information is important for making decisions about lesson planning and future testing as well as knowing how to approach different students and classes.

In order to analyze anything, specific criteria must be established. In test analysis, three different criteria are generally used: the content of the test, the norm group taking the test, or an individual student.

Criterion-Referenced Scoring

Criterion-referenced scoring uses the content of the test itself as a the basis of comparison for assessing the student's level of achievement. Thus, a content-referenced score of 80% means that the student correctly answered 80% of the items on the test. The most common of all methods of test analysis, content-referenced scoring is used in:

- to determine the level of achievement at which to begin a student;
- to determine how much a student has learned from given section of material; and
- to determine a student's potential in a given field.

Norm-Referenced Scoring

Sometimes referred to as "grading on a curve," norm-referenced scoring uses the class as a whole as a referent. The class average, or mean, usually serves as the base score against which all other grades are judged. The mean is calculated by adding all the scores and then dividing by the number of scores given (e.g., the total test scores in a class of 25 equals 1625, the class average, or mean, is 1625/25, or 65).

Some schools require certain percentages of passing grades per class. If these percentages are exceeded, the teacher is seen as "too easy"; conversely, if these percentages are not met, students can become indignant and discipline problems can result. In these instances, it is important to be able to adjust students' scores so that official standards can be met. Such adjustments can be made by:

- adding (or subtracting) points to students' overall scores
- adding (or subtracting) points to sections in which students scored the highest
- making the next test easier (or harder)
- weighting the test lightly (or heavily) on the semester-end grade by multiplying each test by an appropriate amount, or coefficient. For example, in the table below, Panafricanism is weighted three times, which gives the student an end of term score of 84%.

TEST	SCORE	RELATIVE WEIGHT (coefficient)	SCORE WITH WEIGHTING (coefficient)	
Pre-colonial Africa	50%	1	50	
Neo-colonial Africa	85%	1	85	$\frac{420}{5} = 84\%$
Panafricanism	95%	3	285	
TOTAL		5	420	

Self-Referenced Scoring

Though it is difficult to do in large classes, self-referenced scoring measures an individual student's rate of progress relative to his or her own past performance. By comparing past test scores, a teacher can assess a student's rate of progress in a given subject area or across subjects to see where he/she is in need of help.

The advantages and disadvantages of Criterion-, Norm- and Self-Referenced scoring are listed below:

Type of Grading	*Advantages*	*Disadvantages*
Norm-referenced	1. Allows for comparisons among students 2. Classes can be compared to other classes 3. Allows teacher to spot students who are dropping behind the class	1. If whole class does well, some students still get poor grades 2. If class as a whole does poorly, a good grade could be misleading 3. Does not allow individual progress or individual circumstances to be considered 4. The whole class (or large portions of it) must be evaluated in the same way 5. Everyone in class (or norm group) must be evaluated with the same instrument under the same conditions
Criterion-referenced	1. Helps teacher to decide if students are ready to move on 2. Criteria are independent of group performance 3. Works well in a mastery-learning setting 4. Each individual can be evaluated on different material, depending on his or her level of achievement	1. It is difficult to develop meaningful criteria (therefore arbitrary cut-off scores are often used) 2. Presents unique problems in computing the reliability of criterion-referenced tests 3. Makes it difficult to make comparisons among students
Self-referenced	1. Allows you to check student progress 2. Makes it possible to compare achievement across different subjects for the same individual	1. All measures taken on an individual must be taken with similar instruments under similar circumstances 2. Does not help you to compare an individual with his or her peers

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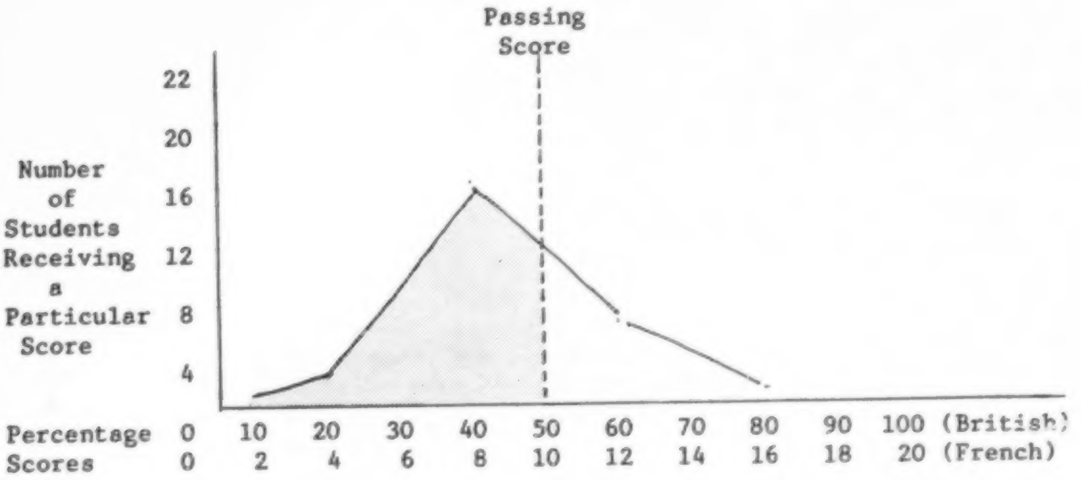
Percentile Ranking

Just as the raw scores for individual test items can be transformed to fit a certain testing model (e.g. Francophone testing - score/20), so can one set of test results be analyzed in relation to previous tests as well as other classes' performances. Percentile ranks offer a way to obtain an image of class performance on a test by calculating the percentage of persons who obtain lower scores. To obtain a percentile rank, divide the number of students below the passing grade by the total number of students who took the test. For example, if 10 students out of 30 get passing scores (50% and above), then the percentile ranking for that test would be 66% -- that is, 66% of that class rank in the lower fiftieth percentile.

Charting Student Performance

Just as percentile ranking can give a teacher a comparative measure of class performance, charting the results of a test can give the teacher an internal picture of how his/her class has performed as a whole. The graph below, for example, clearly and graphically illustrates that the majority of the students in the class failed the test.



To chart student performance:

1. Tally the number of students who obtain each score. (e.g. 4 students at 4/20 - or 20/100, 16 students at 8/20 - or 40/100.)

2. Plot each number on a chart as illustrated above.

3. Draw a vertical line intersecting the passing grade. (In the French system 10/20 is passing; in the British system 50/100 is passing).

The teacher can obtain a visual comparison of class performance over a semester or a year by superimposing charted results of multiple tests.

ACTIVITY BOX

1. You are teaching two different classes the same material, but one performs much better than the other on tests. Use three of the methods described above to measure the difference?

2. Having determined which students and/or classes are falling behind, list the specific measures you would take to improve their performance? How would you implement these measures?

Implications for Instruction

After constructing, administering, scoring and analyzing a test, a teacher might know how a class compares to itself, other classes and individual students. But what does it mean when half a class fails a test? Or when no one fails? In other words, what happens when a test or activity does not successfully measure what it is designed to measure? First of all, by asking some of the questions below, the teacher can identify the symptom or problem which must be addressed:

- On the whole, did class performance vary from past, internal standards?
- Did this class perform better or worse than other classes which took this test?
- Did certain students do substantially better or worse than the rest?
- Were the answers to any particular test items consistently correct or incorrect?

If the answer to any of these questions is "yes," then the teacher should determine the cause for this variation. Often, it is due to:

- Discrepancies between material covered in class and material covered on the test.
- Variations in the degree of difficulty of test items.
- Factors which might make one class slower than another (e.g. afternoon vs. morning sessions).

- Personal dynamics within the classroom (e.g. trouble students, stronger students sitting next to weaker ones).
- Personal attitudes you the teacher may have toward one student or class which might have affected test construction, administration or scoring.

Once one of these factors has been identified as the probable reason for shortcomings in a test or activity, the teacher can then decide what change, if any, should be made in his/her instructional strategy. If material was covered on the test that was inadequately covered in class, the teacher may need to rewrite objectives and upgrade lesson plans. If one class seems slower or less responsive than another, the teacher may try to vary the techniques and materials they use to break old instructional styles and challenge the interests of all the students. If an evaluation of the situation indicates that personal dynamics within the class are the cause, the teacher may need to adjust his/her classroom management style.

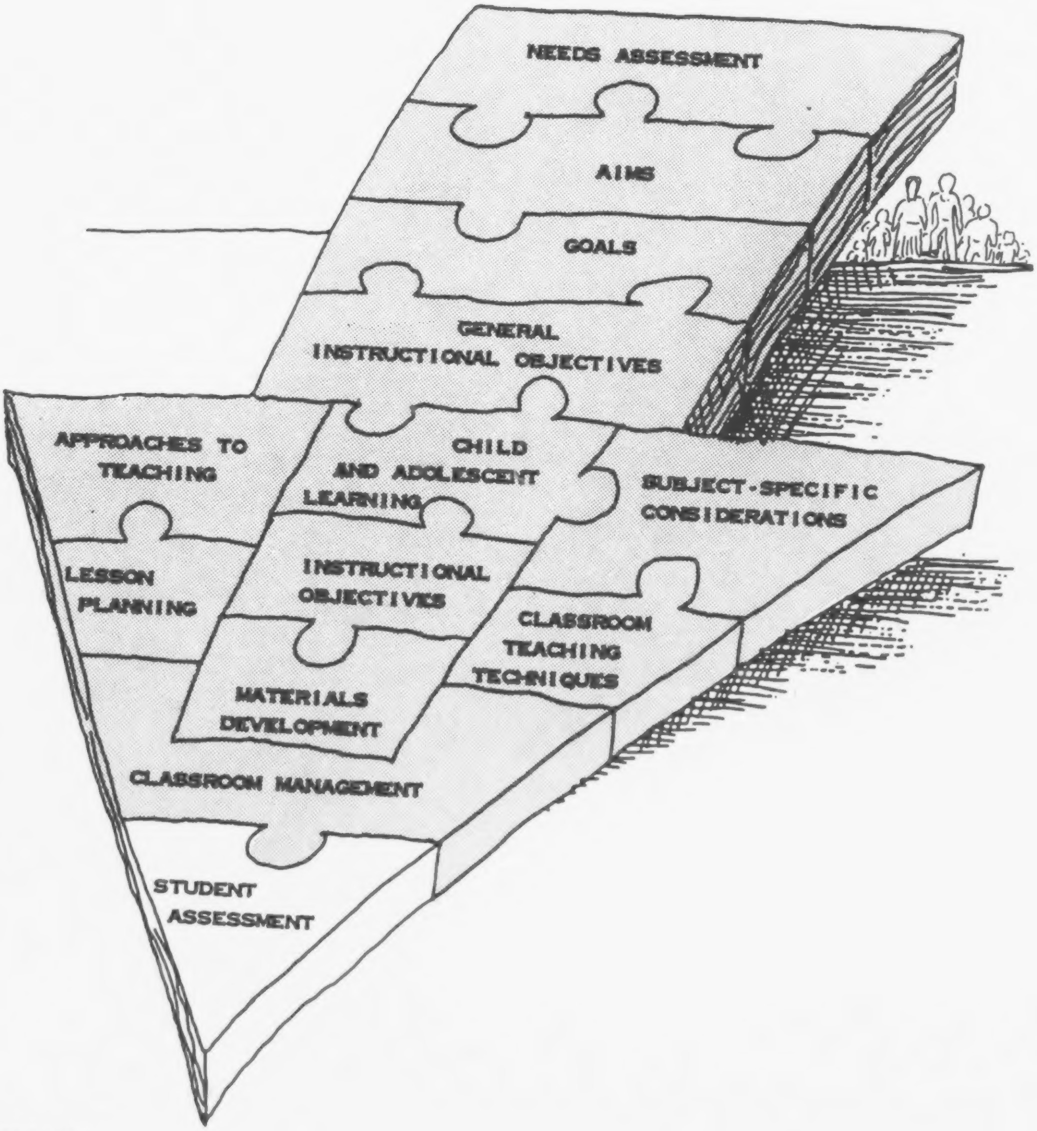
Ultimately, assessment of student learning is an indirect assessment of teacher effectiveness. The teacher who has carefully evaluated assessment techniques according to the criteria above will find that such techniques will yield more than scores and grades; they will provide the teacher with a basis for assessing his or her own performance in the classroom. Most important, effective assessment skills will provide the teacher with a picture of student learning that reflects the teacher's ability to "read" his/her students and provide them with the best learning opportunities possible.

ACTIVITY BOX

Take a test you have given recently and use the information above to analyze it. Develop three instructional strategies that you would use to:

a. make the learning activities for this unit (presentation of test material) more effective;

b. better meet the learning needs of your students.



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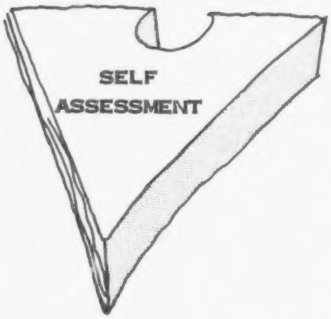
SELF-ASSESSMENT

SELF-ASSESSMENT



Self-assessment can be a powerful technique for the teacher who chooses to work independently to determine personal strengths and improve his/her teaching strategies and skills. The following suggests ways to self-evaluate teaching and classroom management styles. (Refer to the **Supervision** section of this manual for a more detailed description of observation techniques and procedures).

1. Prepare a checklist (such as the one which follows) of important pedagogical aspects mentioned in this manual as a way to periodically evaluate your teaching.

___ Are you clear about your objectives for the lesson?

___ Is the lesson well planned?

___ Are you going to be using visual aids in the lesson and are these visual aids prepared before the lesson?

___ Do the planned learning activities provide opportunities for student participation?

___ Are the activities varied and stimulating for the students?

___ Are directions presented in a clear fashion? Are you sure that the students understand your directions and explanations?

___ Do you greet the students before the lesson in a manner that lets them know that you are serious about your teaching and you enjoy being with them?

___ Do you include a review or warm-up exercise after you have greeted the students?

___ Do you give positive feedback to individual students or the whole class when their performance/behavior is good?

___ Do you address the students by name?

___ Do you talk to the whole class? Do you maintain good eye contact and project your voice so that all students in the class can hear you without difficulty?

___ Is your appearance culturally appropriate?

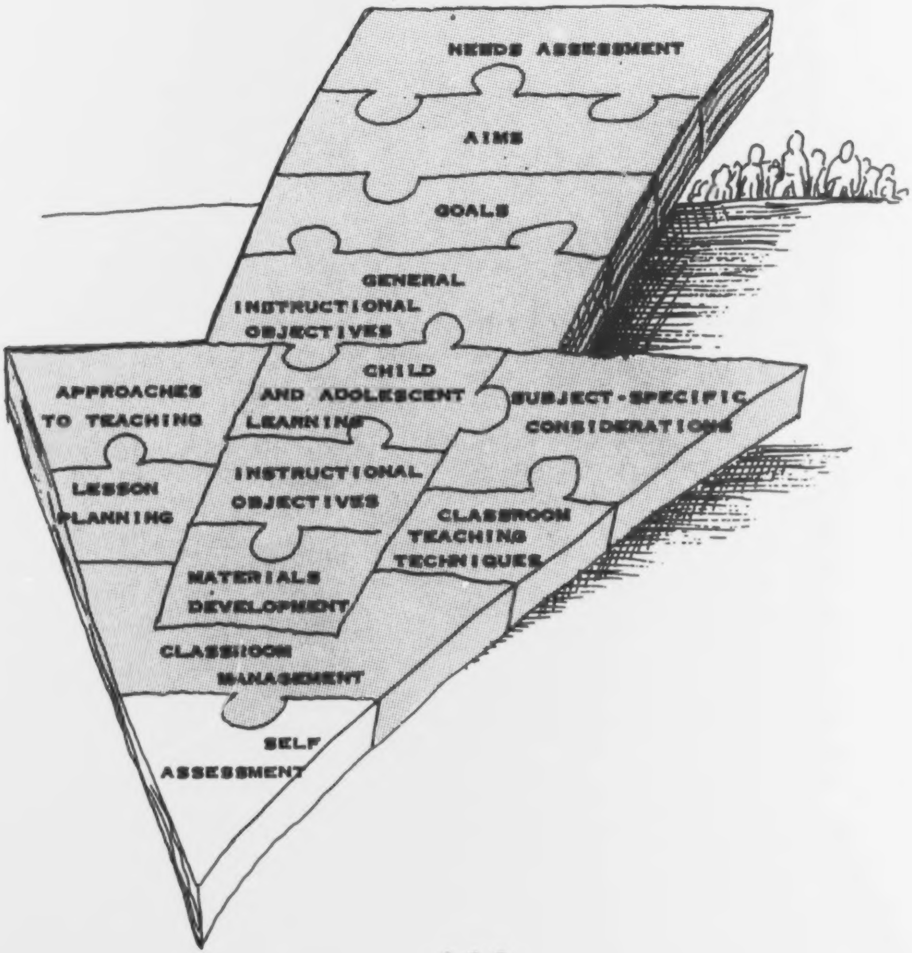
2. Ask other teachers to observe your teaching (using a checklist or guidelines similar to the one above)

3. Use class meetings as a way to get student feedback and at the same time to talk to students informally. (It must be remembered that students are not used to evaluating their teacher so comments may not be as candid and sincere as you might want).

4. Test students periodically either formally or informally to evaluate their understanding of material presented.

5. Use written evaluations by supervisors or students as a way of collecting feedback on your teaching effectiveness.

By evaluating yourself periodically, you can get valuable insights that will make your teaching not only more effective but also much more enjoyable.

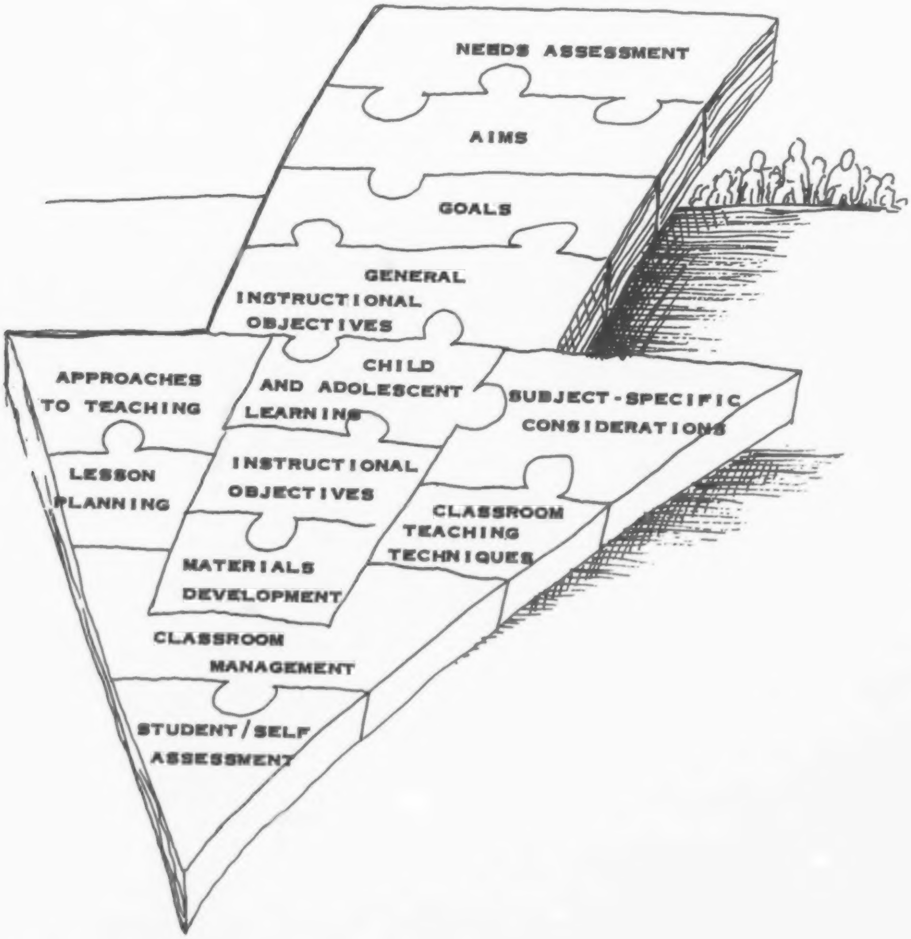


REVIEWING THE EDUCATIONAL PROCESS

REVIEWING THE EDUCATIONAL PROCESS

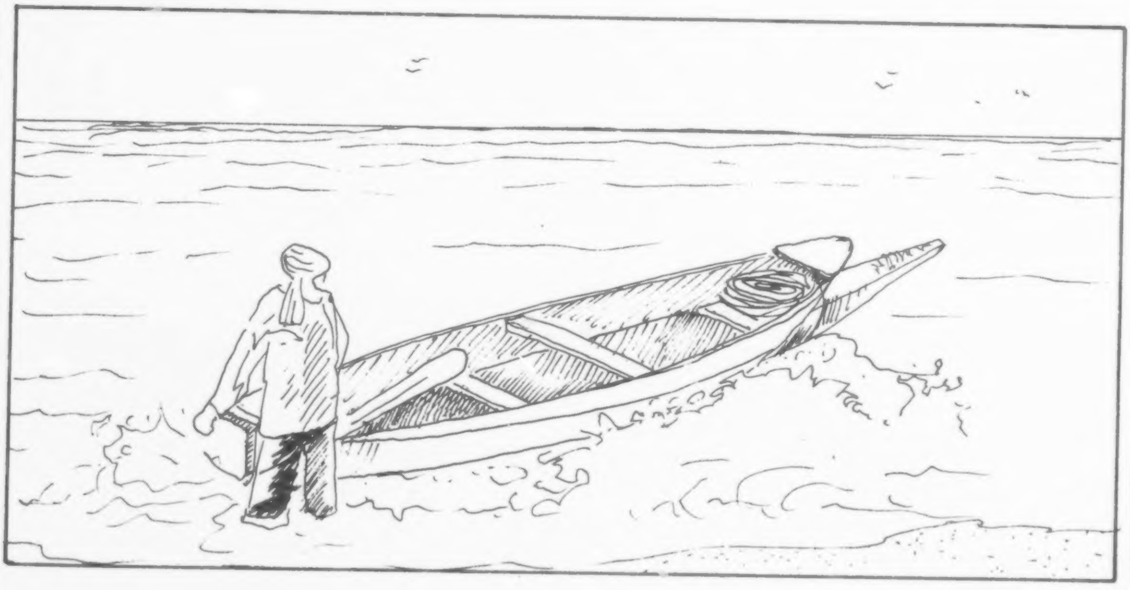
As the Pieces Fall in Place

The puzzle is now complete. Each of the pieces has been presented and reviewed, and the relationship to other pieces should now be clear.



The teacher should remember that there are many levels of curriculum decision-making: national, institutional, instructional and individual. Where some of these may be outside the direct control of the teacher, others are entirely his or her responsibility. Understanding the educational process as a whole can empower the teacher and make him/her an active participant in this process rather than an outside observer.

The final chapter of this manual, **Collaboration**, will help the teacher and teacher trainer alike to link up with colleagues and make the most of the resources at their disposal.



CHAPTER 3

COLLABORATION

CHAPTER 3 COLLABORATION

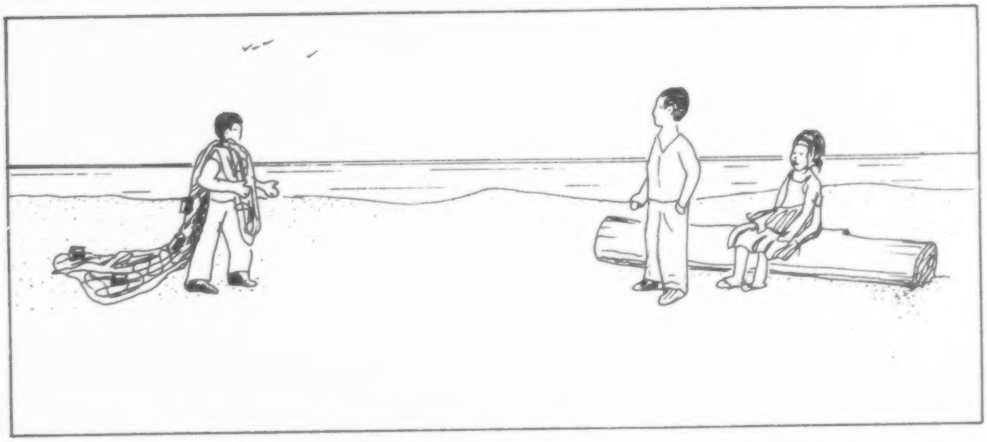
In an effort to meet Peace Corps' goal "to help host country governments meet their needs for trained manpower" this manual is designed to provide Peace Corps Volunteers with the information they need to train teachers. But standard teacher training topics alone do not address the thousand and one problems that arise when teaching in a Third World setting.

Upon leaving the teacher training college, the new teacher is usually assigned to a rural post. Because academic standards in rural schools are seldom on a par with those of population centers, where most teacher training colleges are located, the new teacher is immediately faced with a host of problems, some of which include:

- Overcrowded classrooms.
- A shortage of qualified teachers.
- A shortage of teaching materials.
- A lack of standardization of existing materials.
- A general lack of communication with other schools and institutions and consequent feeling of isolation and low morale.
- A lack of opportunities for continued education.
- A low salary.

In short, the rural sectors of most developing countries suffer from a chronic lack of material and human resources. It is therefore vital that Volunteers work hand in hand with host country nationals to create the kind of network necessary for the growth and sustenance of teachers in the field. This section will introduce the problems and possibilities related to collaboration in human and material resource development. Suggestions will be given and specific skills necessary for successful collaboration will be presented and discussed.

TAPPING HUMAN RESOURCES



Efforts to improve teaching conditions in developing countries start with human resource development. Two of the most difficult tasks related to human resource utilization are:

- making do with limited or insufficient resources, and
- knowing how to tap the resources available.

Given the critical shortage of resources in most developing countries, dealing with the first task is most often an exercise in frustration. Because of the lack of trained manpower and expertise, most developing countries rely heavily on foreign assistance to meet their manpower needs. Understandably, qualified people are often overextended, underpaid, and difficult to recruit for the smallest of tasks. Even so, the fact remains that many vital projects never get off the ground not for lack of qualified people, but for lack of knowledge about how to tap the human resource pool.

How do we tap our human resources to the greatest advantage? The following section presents some ideas about collaboration with colleagues. Some of these ideas can be tried by teacher-trainers; others might be more suitable for teachers or Peace Corps Volunteers in the field. The point here is that all types of collaboration such as these should be encouraged whenever and wherever possible.

In-service Training Workshops and Conferences

Most developing countries host In-Service Training sessions, usually in the form of subject-specific national teachers' conferences. These provide an excellent opportunity to meet other teachers experiencing similar problems. They also provide an opportunity to discuss and present new ideas, make recommendations to the ministry regarding educational policies and practices, and form networks. One important role such conferences play is modeling -- by following the format of lectures, presentations and workshops typically found at national teachers' conferences, teachers can return to their assigned towns and organize similar activities. For example, if there are five English teachers in one town, they can organize their own "mini-conference" in a local school and share teaching methods, materials, and ideas.

Advisory Groups

Because academic standards can vary dramatically from town to town, and because of the shortage of qualified inspectors in most developing countries, the most available qualified consultants are often local teachers. Not only do they have the "hands on" experience and expertise in their fields, but because their children, neighbors and friends attend the schools in which they teach, they also have a vested interest in the improvement of educational standards. The formation of advisory groups to consult with other teachers, school administrators, members of parents' associations, and local officials can open the lines of communication and the channels of material and human resource exchange.

Classroom Observation/Critiquing

Most teachers are understandably threatened by any outsider who comes and observes their classes. However, there is enormous value in being observed and critiqued, if for no other reason than to get one or two new ideas about teaching. One method of encouraging classroom observation is to ask a colleague whose opinion you respect to come observe and critique your lesson. At first, most host country nationals resist such ideas since they are reluctant to insult the expatriate "expert." But if the invitation is posed respectfully and sincerely, and if a certain level of trust already exists, host country nationals will often oblige you. In this way, you will serve as a model which can then be followed by your colleagues. You also experience the additional advantage of having your own teaching style observed by a resident expert.

An important thing to remember about classroom observation is that critiquing does not mean criticizing in the negative sense. Simply describing what you saw, reinforcing positive elements and inquiring about questionable ones can constitute more feedback than the teacher has received since he/she left the teacher training college (see **Feedback/ Critiquing** below).

Team Teaching

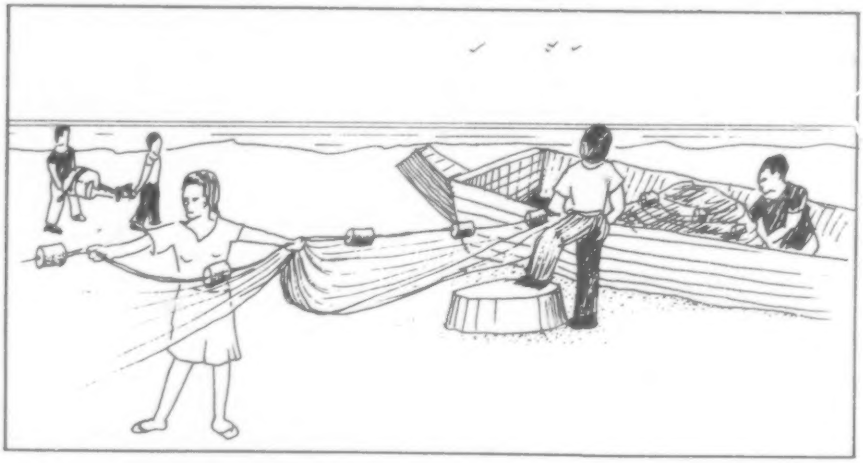
Another approach to in-class collaboration is team teaching. If a teacher is unwilling to observe or be observed, perhaps he/she might be willing to co-teach a class with you. For example, if you are teaching "story telling devices" in an English class, one of your English-speaking colleagues might be able to relate some local history using the same device. Likewise, if you are presenting a geometry lesson on circles and circumferences, a science teacher might be recruited to illustrate with drawings or models of planets, moons or stars. Or perhaps more simply, you can ask another teacher to co-teach a class with you on an ongoing basis -- an exercise which would facilitate team research, lesson planning, teaching, testing, and observation.

ACTIVITY BOX

1. Of all the teachers' conferences you have ever attended, what session made the greatest impact on you? How was the session presented? Could you or one of your colleagues present it or adapt it so that it could be presented to teachers at your school? How?

2. Are any of your colleagues currently teaching subjects which relate to the subject(s) you are teaching? How could the two subjects be taught jointly?

TAPPING AND DEVELOPING MATERIAL RESOURCES



Because material resources are always in short supply, curriculum and materials development is always an issue. As with human resources, two basic questions are:

- How and where can needed materials be procured? and
- How can we mobilize the resources we already have?

These questions and the issues associated with them are dealt with in great detail in the **Materials Development and Resource Utilization** section of the Manual. One particularly effective way to share materials and techniques among teachers involves the creation of newsletters and material exchange or resource centers. Some of the functions these serve are to:

1. PROVIDE AN INCENTIVE TO IMPROVE EDUCATIONAL STANDARDS by:
    - Opening up a channel through which students and teachers can read and share their own contributions.
    - Giving teachers new ideas for lesson planning, creative classroom techniques, etc..
    - Encouraging further innovation.
2. PROMOTE A SENSE OF LOCAL IDENTITY AND PRIDE by:
    - Disseminating locally-generated knowledge, and
    - Providing a means of publicizing local and national issues.

3. RAISE AWARENESS OF EDUCATIONAL ISSUES by:

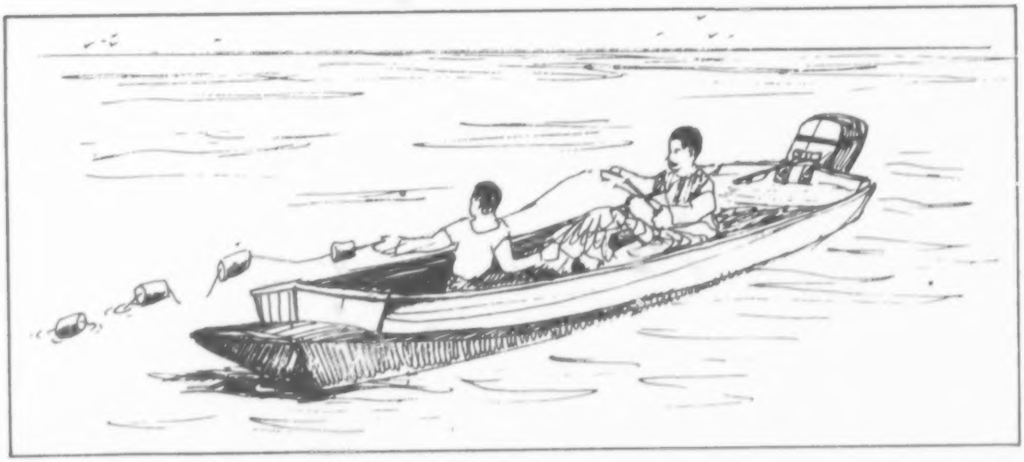
   - Revealing material and curricular discrepancies from region to region, and
   - Informing the ministry of educational needs.

Admittedly, these goals are ideal and in many cases simply unattainable. Resistance to innovation often proves to be a mightier force than the greatest enthusiasm. Still, to the extent that these goals are desireable by Volunteers and host country nationals alike, they are worth bearing in mind and pursuing to the extent possible.

ACTIVITY BOX

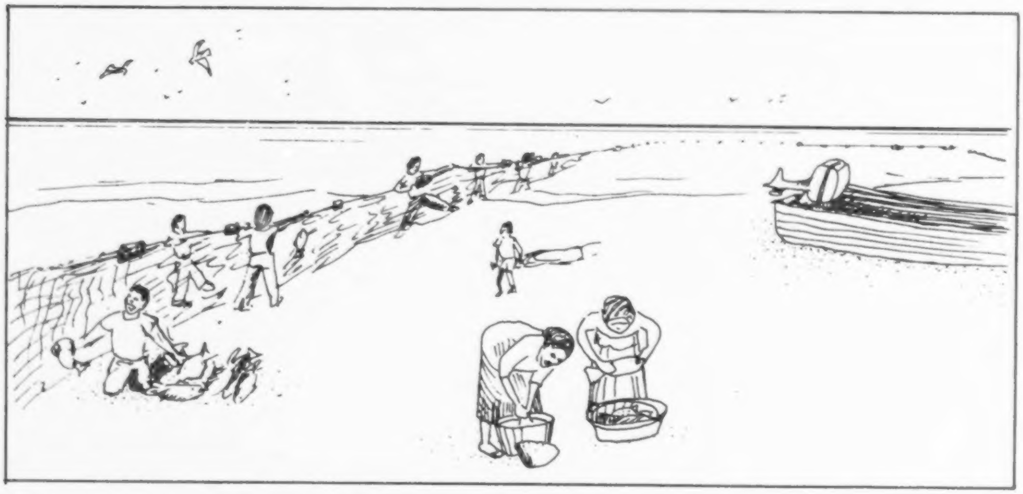
Does your school currently publish some kind of regular newsletter? If not, what material resources exist at the school with which to publish one?

INFORMAL COLLABORATIVE ACTIVITIES



Though informal activities often do not receive official recognition, they can prove to be the most effective of all collaborative activities. Because most people "don't care how much you know until they know how much you care," personal contacts and friendships can make a much deeper impact on your colleagues than the most prestigious of projects. Activities ranging from parties and socials to weekly lunches, from English clubs to study groups can serve the dual purpose of sharing information and generating good will. Such activities also expand your knowledge of the community and base of potential collaborators who can be tapped for future activities. Most importantly, informal activities will enable you to get to know local people on a personal level which can develop into lifelong friendships -- probably the most meaningful and long-lasting product of your work as a Volunteer.

COLLABORATION SKILLS



Collaboration does not just happen; it occurs as a result of much hard work, risk-taking, research, more hard work, and patience. Because of the many facets of collaboration, many skills must be learned in order to work successfully with others, especially in the areas of organization, communication, working in groups, feedback and leadership.

Organization

While the need for collaboration might be self-evident, the means by which it is achieved is not. An idea alone is not enough; to transform an idea into reality requires a coordinated effort which involves defining the objective, determining the availability of resources, formulating and monitoring a plan of action.

1. **Define the objective.** Identifying an area of need is easy; deciding what to do about it is more difficult. Say, for example, students at one level do not have workbooks to accompany in-class textbooks. The need might be thus stated: students need workbooks. The first question you should ask is: **Is this truly a need?** By checking with colleagues and students you can determine if others perceive this as a need that deserves attention. If the need is felt by others you will be ready to decide what to do about it. A statement of the problem above implies a base objective: workbooks must be made available to students who need them. But **what do you want to do about it?** Write your own book? Establish a book-writing team? Request books and/or

funds from the government? Each idea suggests another question: **Why do you want to do it?** If the reason is because you feel a need for the standardization of learning materials, then a standardized workbook must be obtained. If, on the other hand, the reason is to help students understand their in-class textbook assignments, perhaps something other than a workbook might suffice, like special study sessions, supplementary lessons, or tutoring. In other words, it is important to provide a rationale as a type of "litmus test" for all possible alternatives before the objective is finally defined.

2. **Determine what your resources are.** The best litmus test in any collaborative effort will always be the opinions of other people. By asking involving colleagues in the process of defining problems and possible solutions, the chances of addressing a clearly felt need are greater; participation will also increase a hundred fold, as will the project's chance of success. Hence, instead of asking: How can I do this? the question should be recast: **Who can help me do this?** In order to be sure that all potential collaborators have been considered, it is wise to **brainstorm a list of potential resource people.** The key here is to defer judgement; some names might not seem immediately relevant, but in the process of generating such lists, one name might suggest another, or the objective might change altogether. After generating a list of potential collaborators, it is time to **determine who can do what.** A merchant probably will not want to talk about the Weimar Republic, but he would probably wax eloquent on the subject of buying and selling produce --an excellent application of basic mathematics. It is also all too easy to assume that the local carpenter probably knows nothing about eastern religions. This may be true, but until he is asked, who knows? It is better to flatter someone by assuming they know a lot than to lose the benefit of their expertise by assuming they know nothing. Once potential collaborators and duties have been determined, it is necessary to **discover what material and financial resources are available.** This is the beginning of the research stage, at which all relevant power structures and potential funding agents are identified and analyzed from the local to the national level. The overriding assumption should be that all persons, groups and official agencies have access to some material and financial resources, so it is important that all relevant parties be included in the research process: colleagues, school administrators, ministry officials, parents' groups, civic groups, subject committees, educational institutes. etc. (See the section on **Comparing Educational Systems** for more information on this approach.)

3. **Develop a plan of action.** Now that you have a list of human, material and financial resources, a plan of action must be devised to **identify the whos, whats, whens, and wheres.** This can be done most easily on a step-by-step basis. For example, Step 1 for the workbook project cited above might be "soliciting help": Over the next month **(when)**, John and I **(who)** will ask 10 people from our school **(where)** if they are interested in co-authoring a workbook **(what)**. While developing a

plan of action, it is advisable to **identify a key resource person who is knowledgeable in the field.** This can help not only to keep the process moving forward, but also to avoid some of the difficulties that inevitably arise for sheer lack of experience. Finally, once a plan of action has been drafted, **create a detailed timeline of activities.** This will serve not only as a criterion against which you measure your progress, but also will help in additional planning (for example, when certain materials should arrive, when to arrange for meetings, etc.).

4. **Monitor the implementation.** The biggest enemy of successful collaboration is low morale. It is quite common to get discouraged when plans get scuttled, when people do not respond favorably, or when nothing seems to be working. If you **keep lots of written notes,** it is possible to take a break, then return to the task of assessing who is appropriate for what. Keeping written notes also provides a means by which you can **build in an evaluation system.** Using your plan of action as a reference, decide what criteria you will use to determine the success of your project. Should it be accomplished in a month? A year? Should it result in improved student responsiveness in class? In improved grades? Specific indicators should be established so your progress can be evaluated both during and after the project. If some criteria are not met, a decision must be made either to change the way in which the project is being pursued, or change the criteria. In other words, you might want to **revise** the project and/or the project criteria **as needed.** If original plans prove to be unrealistic, it is better to revise expectations than to become discouraged that all problems were not foreseeable or that the project turned out to be bigger or more difficult than planned.

ACTIVITY BOX

1. Ask the teachers in your school: "If you could do anything to improve educational standards at your school, what would it be? What efforts have been made in the past to make this happen? Who would know?"

2. Make a list of five colleagues, five administrators, and five community members who might be able to and/or interested in working for the improvement mentioned in activity #1.

Communication

The process of communication is twofold: sending and receiving information. In particular, verbal communication involves talking and listening. When talking, care must be taken to:

- Be as clear and concise as possible.
- Refrain from being offensive.
- Consider the listener's position.
- Be aware of assumptions made in statements.
- Refrain from talking too much.

Active engagement in listening is called active listening for which three considerations are paramount: comprehension, acceptance and processing. In order to listen actively, you must:

- Pay attention to both verbal and nonverbal messages.
- Concentrate on what the other person is saying, not on what you want to say next.
- To the best of your ability, refrain from judgement.
- Try to empathize with both verbal and body language.
- Ask questions to show interest or for clarification.
- Paraphrase and/or summarize.

Feedback/Critiquing

The processing aspect of listening can be redefined as feedback and is such an important skill that it warrants special consideration here. Briefly, feedback is a communication to a person (or group) which gives that person information about how he/she affects others. In order to be effective and fair, feedback must be objective, well-timed and validated. To that end, feedback must be:

- **Descriptive** rather than evaluative. By describing one's own reaction, it leaves the individual free to use it or to use it as he/she sees fit. By avoiding evaluative language, it reduces the need for the individual to react defensively.

- **Specific** rather than general. To be told that one is "dominating" will probably not be as useful as to be told that "just now when we were deciding the issue you did not listen to what others said and I felt forced to accept your arguments or face attack from you."

- **Take into account the needs of both the receiver and giver of feedback.** Feedback can be destructive when it serves only our own needs and fails to consider the needs of the person on the receiving end.

- **Directed toward behavior which the receiver can do something about.** Frustration is only increased when a person is reminded of some shortcoming over which he/she has no control.

- **Solicited** rather than imposed. Feedback is most useful when the receiver himself has formulated the kind of question which those observing him/her can answer.

- **Well-timed.** In general, feedback is most useful at the earliest opportunity after the given behavior, depending on the person's readiness to hear it, support available from others, etc.

- **Checked to insure clear communication.** One way of doing this is to have the receiver try to rephrase the feedback he/she has received to see if it corresponds to what the sender had in mind.

Just as feedback skills can facilitate constructive interpersonal communication, so can critiquing skills foster constructive evaluation of a lesson. In addition to the feedback skills mentioned above, a good critiquer should:

- **Let the person being critiqued give a self-critique first.** More often than not, he/she will already know their areas of strength and weakness. By letting him/her self-critique first, egos go unbruised and much of your job is already done.

- **Start with something positive.** It is much easier and more encouraging to build on a strength than to eliminate a weakness. Starting with something positive also decreases the tendency toward defensiveness.

- **Keep negative critiques (or criticisms) to a minimum.** Most people can handle one or two critiques; any more than that is not only discouraging but difficult to act on. Change comes slowly.

- **Accompany each criticism with one or two suggestions for improvement.** If the critiquer can find blame but cannot recommend something better, the person being critiqued is unfairly faced with two difficult tasks: abandoning an old technique and creating a better one.

- **Each criticism should be accompanied by at least one example.** It is not very helpful if the critiquer says, "At one point, your visual aid was inappropriate" if he/she cannot remember what it was.

- **If possible, end on a positive note.** The person being critiqued will make the greatest progress if he/she believes it is possible. It is therefore important not to demoralize, but to encourage.

ACTIVITY BOX

1. What do you see as the biggest difference between giving feedback and critiquing?

2. What do you feel are your greatest areas of strength in giving feedback and critiquing? Your greatest areas of weakness?

Working in Groups

To prepare for working in groups, a large part of a successful collaboration strategy, the teacher should understand the basic principles of group dynamics and the various functions group members perform. When working in groups, it is important to maintain a balance between process and task functions.

Process functions include:

- ENCOURAGING: being friendly, warm, responsive to others, praising others and their ideas, agreeing with the accepting the contributions of others.

- MEDIATING: harmonizing, conciliating differences in points of view, making compromises.

- RELIEVING TENSION: draining off negative feeling by jesting or throwing oil on troubled waters, diverting attention from unpleasant to pleasant matters.

- FOLLOWING: going along with the group, somewhat passively accepting the ideas of others, serving as an audience during group discussion, being a good listener.

- STANDARD SETTING: expressing standards for the group to use in choosing its subject matter or procedures, rules of conduct, ethical values.

- GATE KEEPING: trying to make it possible for another member to make a contribution by saying, "We haven't heard from Karamo yet," or suggesting limited talking time for everyone so that all will have a chance to be heard.

Task functions include:

- INITIATING: suggesting new ideas or a changed way of looking at the group problem or goal, proposing new activities.

- INFORMATION SEEKING: asking for relevant facts or authoritative information.

- INFORMATION GIVING: providing relevant facts or authoritative information or relating personal experience pertinently to the group task.

- OPINION GIVING: stating a pertinent belief or opinion about something the group is considering.

- CLARIFYING: probing for meaning and understanding, restating something the group is considering.

- ELABORATING: building on a previous comment, enlarging on it, giving examples.

- COORDINATING: Showing or clarifying the relationships among various ideas, trying to pull ideas and suggestions together.

- ORIENTING: defining the progress of the discussion in terms of the group's goals, raising questions about the direction the discussion is taking.

- TESTING: checking with the group to see if it is ready to make a decision or to take some action.

- SUMMARIZING: reviewing the content of the past discussion.

These functions are not needed equally at all times by a group. Indeed, if a given function is performed inappropriately, it may interfere with the group's operation -- as when some jester relieves group tension just when the tension is about to result in some real action. But often, when a group is not getting along as it should, a diagnosis of the problem will probably indicate that nobody is performing one of the functions listed above that is needed at that moment to move the group ahead.

ACTIVITY BOX

1. When you work in groups, do you find yourself playing one role more than any other? Which one(s)?
2. How does your role affect the dynamics of the group?
3. Do you ever wish you could stop playing a particular role or start playing another one? How can you make this happen?

Leadership

Just as group dynamics are the results of process and task functions, so too are authority and leadership. The balancing of concern for task, or production, and concern for people may help to distinguish the authority figure or leader from other members of the group, but in reality these are simply another dimension of group membership.

The leader performs process and task functions like other members of a group. The biggest difference between leader and group member tends to be one of vision and the ability to keep the group on task in order to reach this vision. The role of "leader" often emerges from within the group and is characterized by the following functions:

- Managing anxiety and tension
- Managing the creative process
- Challenging the group
- Keeping the group on task
- Leading the group towards a particular vision

In other words, a good leader influences a group, but does not wield authoritarian power: the more a leader can encourage equal participation, the better a leader he/she is.

An authority figure is often imposed from without or established by consensus from within. The functions most often associated with this role are:

- Establishing lines of authority
- Keeping communications open
- Managing time and space
- "Protecting" the group

It is the task of the skillful collaborator to recognize the distinctions between these two roles and the times, within group development, that these roles are most crucial. In the earlier stages of group development, members tend to depend on authority figures quite heavily. It may be possible, after a time, to apportion the tasks associated with the authority figure to other members of the group and step back into the more guiding role of the leader. As group members feel more comfortable with their roles and the tasks at hand, they will become less dependent on any single individual (e.g. the leader) and more able to work democratically. Thus, the collaborator may need to accept the responsibility for authority or leadership in the early stages of group development, but the ultimate goal of any collaborative venture should be to share more and more of the responsibility and decision-making power with other group members.

ACTIVITY BOX

Think of a time when you worked in a group, was there a noticeable leader? List the things that you think made him or her a good leader.

Networking

Through collaboration, interpersonal relationships can evolve into a working group which can, in turn, collaborate with other groups. This process, often called networking, is at once an ideal and essential outcome of collaboration.

The metaphor of the net is apt. By itself, a strand of twine can do little more than bind, attach, or draw. In interlocking connection with other strands of twine, however, it becomes capable of catching and holding things which might otherwise slip by.

By themselves, people can do little more than survive, put in an honest day's work, and dream. It is only when we "connect" with others that we are able to combine our physical and creative energies into more productive and worthwhile endeavors. The greatest legacy a development worker can leave is a network of interdependent groups of host country nationals actively engaged in the ongoing process of educational development. By collaborating with others, we can catch more fish than we ever dreamed possible -- enough, perhaps, to eat for a lifetime. Ambitious? Certainly. Yet, in the end, it is a worthwhile goal.

APPENDIX

CONTENTS:	REFERENCE:
Flanders' Interaction Analysis	Chapter 1 - Supervision
Developmental Profile	Chapter 2 - Child and Adolescent Learning
Lesson Plan Format	Chapter 2 - Lesson Plannning

FLANDERS' INTERACTION ANALYSIS WORKSHEET

INTERACTION CODE	TYPE OF INTERACTION
1	Accepts feelings
2	Praises or encourages
3	Accepts or uses student's statement
4	Lectures
5	Asks questions
6	Gives directions
7	Criticizes or justifies authority
8	Student talk - response
9	Student talk - initiation
10	Silence or confusion

	SECONDS											
MINUTES	5	10	15	20	25	30	35	40	45	50	55	60
1												
2												
3												
4												
5												
6												
7												
8												
9												

%1 = ________ %2 = ________ %3 = ________ %4 = ________

%5 = ________ %6 = ________ %7 = ________ %8 = ________

%9 = ________ %10 = ________

DEVELOPMENTAL PROFILE

KEY
1. An Area of Difficulty
2. Has Some Problems
3. Developing Well
4. A Special Strength

NAME ______________________________

SOCIAL-PERSONAL	Teacher: Date:	Teacher: Date:	Teacher: Date:	Teacher: Date:	Teacher: Date:	Teacher Date:	Teacher: Date:	Teacher: Date:	Teacher: Date:
1. Adaptability									
2. Co-operation									
3. Enthusiasm									
4. Group Functioning									
5. Resolving Conflicts									
6. Seeing Other Points of View									
7. Self-Concept									
8. Self-Control									
9. Self-Direction									
COMMUNICATION									
10. Listening-Comprehension									
11. Listening-Memory									
12. Reading-Comprehension									
13. Reading-Vocabulary									
14. Speaking-Discussing/Requesting									
15. Speaking-Mechanics									
16. Speaking-Vocabulary									
17. Writing-Expression									
18. Writing-Mechanics									
19. Writing-Vocabulary									
CONCEPT DEVELOPMENT									
20. Cause and Effect									
21. Classification									
22. Conservation									
23. Order and Measurement									
24. Probability									
25. Space: Size, Position & Motion									
26. Time: Duration and Sequence									
PROBLEM SOLVING									
27. Asking Questions									
28. Drawing Conclusions									
29. Estimating									
30. Evaluating									
31. Observing									
32. Organizing									
33. Predicting									
34. Selecting & Using Relevant Data									
35. Selecting & Using Tools & Techniques									
36. Taking Viewpoints									

(Developed by Marks Meadow School, Amherst, MA)

LESSON PLAN FORMAT

Subject: ______________________________

Topic: ______________________________ Date: ____________

Objectives:

Time	Activity/Proceedures	Materials

Evaluation:

Comments:

Since 1961 when the Peace Corps was created, more than 80,000 U.S. citizens have served as Volunteers in developing countries, living and working among the people of the Third World as colleagues and co-workers. Today 6000 PCVs are involved in programs designed to help strengthen local capacity to address such fundamental concerns as food production, water supply, energy development, nutrition and health education and reforestation.

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BURUNDI
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Bujumbura

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COSTA RICA
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San Jose

DOMINICAN REPUBLIC
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